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CONDITIONS IN THE UNITED STATES

BENJAMIN FRANKLIN

INFORMATION

To Those Who Would Remove to America

Many persons in Europe, having directly or by letters, expressed to the writer of this, who is well acquainted with North America, their desire of transporting and establishing themselves in that country; but who appear to have formed, through ignorance, mistaken ideas and expectations of what is to be obtained there; he thinks it may be useful, and prevent inconvenient, expensive, and fruitless removals and voyages of improper persons, if he gives some clearer and truer notions of that part of the world, than appear to have hitherto prevailed.

He finds it is imagined by numbers, that the inhabitants of North America are rich, capable of rewarding, and disposed to reward, all sorts of ingenuity; that they are at the same time ignorant of all the sciences, and, consequently, that strangers, possessing talents in the belles-lettres, fine arts, &c., must be highly esteemed, and so well paid, as to become easily rich themselves; that there are also abundance of profitable offices to be disposed of, which the natives are not qualified to fill; and that, having few persons of family among them, strangers of birth must be greatly respected, and of course easily obtain the best of those offices, which will make all their fortunes; that the governments too, to encourage emigrations from Europe, not only pay the ex-

pense of personal transportation, but give lands gratis to strangers, with negroes to work for them, utensils of husbandry, and stocks of cattle. These are all wild imaginations; and those who go to America with expectations founded upon them will surely find themselves disappointed.

The truth is, that though there are in that country few people so miserable as the poor of Europe, there are also very few that in Europe would be called rich; it is rather a general happy mediocrity that prevails. There are few great proprietors of the soil, and few tenants; most people cultivate their own lands, or follow some handicraft or merchandise; very few rich enough to live idly upon their rents or incomes, or to pay the highest prices given in Europe for painting, statues, architecture, and the other works of art, that are more curious than useful. Hence the natural geniuses, that have arisen in America with such talents, have uniformly quitted that country for Europe, where they can be more suitably rewarded. It is true, that letters and mathematical knowledge are in esteem there, but they are at the same time more common than is apprehended; there being already existing nine colleges or universities, viz. four in New England, and one in each of the provinces of New York, New Jersey, Pennsylvania, Maryland, and Virginia, all furnished with learned professors; besides a number of smaller academies; these educate many of their youth in the languages, and those sciences that qualify men for the professions of divinity, law, or physic. Strangers indeed are by no means excluded from exercising those professions; and the quick increase of inhabitants everywhere gives them a chance of employ, which they have in common with the natives. Of civil offices, or employments, there are few; no superfluous ones, as in Europe; and it is a rule established in some of the States, that no office should be so profitable as to make it desirable. The thirty-sixth article of the Constitution of Pennsylvania, runs expressly in these words: "As every freeman, to preserve his independence, (if he has not a sufficient estate) ought to have some profession, calling, trade, or farm, whereby he may honestly subsist, there can be no necessity for, nor use in, establishing offices of profit; the usual effects of which are dependence and servility, unbecoming freemen, in the possessors and expectants; faction, contention, corruption, and disorder among the people. Wherefore, whenever an office, through increase of fees or otherwise, becomes so profitable, as to occasion many to apply for it, the profits ought to be lessened by the legislature."

These ideas prevailing more or less in all the United States, it can-

not be worth any man's while, who has a means of living at home, to expatriate himself, in hopes of obtaining a profitable civil office in America; and, as to military offices, they are at an end with the war, the armies being disbanded. Much less is it advisable for a person to go thither, who has no other quality to recommend him but his birth. In Europe it has indeed its value; but it is a commodity that cannot be carried to a worse market than that of America, where people do not inquire concerning a stranger, *What is he?* but, *What can he do?* If he has any useful art, he is welcome; and if he exercises it, and behaves well, he will be respected by all that know him; but a mere man of quality, who, on that account, wants to live upon the public, by some office or salary, will be despised and disregarded. The husbandman is in honor there, and even the mechanic, because their employments are useful. The people have a saying, that God Almighty is himself a mechanic, the greatest in the universe; and he is respected and admired more for the variety, ingenuity, and utility of his handiworks, than for the antiquity of his family. They are pleased with the observation of a negro, and frequently mention it, that "Boccarora (meaning the white man) make de black man workee, make de horse workee, make de ox workee, make ebery ting workee; only de hog. He, de hog, no workee; he eat, he drink, he walk about, he go to sleep when he please, he live like a genpleman." According to these opinions of the Americans, one of them would think himself more obliged to a genealogist, who could prove for him that his ancestors and relations for ten generations had been ploughmen, smiths, carpenters, turners, weavers, tanners, or even shoemakers, and consequently that they were useful members of society; than if he could only prove that they were gentlemen, doing nothing of value, but living idly on the labor of others, mere *fruges consumere nati,* and otherwise good for nothing, till by their death their estates, like the carcass of the negro's gentleman-hog, come to be cut up.

With regard to encouragements for strangers from government, they are really only what are derived from good laws and liberty. Strangers are welcome, because there is room enough for them all, and therefore the old inhabitants are not jealous of them; the laws protect them sufficiently, so that they have no need of the patronage of great men; and every one will enjoy securely the profits of his industry. But, if he does not bring a fortune with him, he must work and be industrious to live. One or two years' residence gives him all the rights of a citizen; but the government does not, at present, whatever it may have

done in former times, hire people to become settlers, by paying their passages, giving land, negroes, utensils, stock, or any other kind of emolument whatsoever. In short, America is the land of labor, and by no means what the English call *Lubberland,* and the French *Pays de Cocagne,* where the streets are said to be paved with half-peck loaves, the houses tiled with pancakes, and where the fowls fly about ready roasted, crying, Come eat me!

Who then are the kind of persons to whom an emigration to America may be advantageous? And what are the advantages they may reasonably expect?

Land being cheap in that country, from the vast forests still void of inhabitants, and not likely to be occupied in an age to come, insomuch that the propriety of an hundred acres of fertile soil full of wood may be obtained near the frontiers, in many places, for eight or ten guineas, hearty young laboring men, who understand the husbandry of corn and cattle, which is nearly the same in that country as in Europe, may easily establish themselves there. A little money saved of the good wages they receive there, while they work for others, enables them to buy the land and begin their plantation, in which they are assisted by the good-will of their neighbours, and some credit. Multitudes of poor people from England, Ireland, Scotland, and Germany, have by this means in a few years become wealthy farmers, who, in their own countries, where all the lands are fully occupied, and the wages of labor low, could never have emerged from the poor condition wherein they were born.

From the salubrity of the air, the healthiness of the climate, the plenty of good provisions, and the encouragement to early marriages by the certainty of subsistence in cultivating the earth, the increase of inhabitants by natural generation is very rapid in America, and becomes still more so by the accession of strangers; hence there is a continual demand for more artisans of all the necessary and useful kinds, to supply those cultivators of the earth with houses, and with furniture and utensils of the grosser sorts, which cannot so well be brought from Europe. Tolerably good workmen in any of those mechanic arts are sure to find employ, and to be well paid for their work, there being no restraints preventing strangers from exercising any art they understand, nor any permission necessary. If they are poor, they begin first as servants or journeymen; and if they are sober, industrious, and

frugal, they soon become masters, establish themselves in business, marry, raise families, and become respectable citizens.

Also, persons of moderate fortunes and capitals, who, having a number of children to provide for, are desirous of bringing them up to industry, and to secure estates for their posterity, have opportunities of doing it in America, which Europe does not afford. There they may be taught and practise profitable mechanic arts, without incurring disgrace on that account, but on the contrary acquiring respect by such abilities. There small capitals laid out in lands, which daily become more valuable by the increase of people, afford a solid prospect of ample fortunes thereafter for those children. The writer of this has known several instances of large tracts of land, bought, on what was then the frontier of Pennsylvania, for ten pounds per hundred acres, which, when the settlements had been extended far beyond them, sold readily, without any improvement made upon them, for three pounds per acre. The acre in America is the same with the English acre, or the acre of Normandy.

Those, who desire to understand the state of government in America, would do well to read the constitutions of the several States, and the articles of confederation that bind the whole together for general purposes, under the direction of one assembly, called the Congress. These constitutions have been printed, by order of Congress, in America; two editions of them have also been printed in London; and a good translation of them into French has lately been published at Paris.

Several of the princes of Europe of late, from an opinion of advantage to arise by producing all commodities and manufactures within their own dominions, so as to diminish or render useless their importations, have endeavoured to entice workmen from other countries by high salaries, privileges, &c. Many persons, pretending to be skilled in various great manufactures, imagining that America must be in want of them, and that the Congress would probably be disposed to imitate the princes above mentioned, have proposed to go over, on condition of having their passages paid, lands given, salaries appointed, exclusive privileges for terms of years, &c. Such persons, on reading the articles of confederation, will find, that the Congress have no power committed to them, nor money put into their hands, for such purposes; and that if any such encouragement is given, it must be by the government of some separate State. This, however, has rarely been done in America; and, when it has been done, it has rarely succeeded, so as to establish a

manufacture, which the country was not yet so ripe for as to encourage private persons to set it up; labor being generally too dear there, and hands difficult to be kept together, every one desiring to be a master, and the cheapness of lands inclining many to leave trades for agriculture. Some indeed have met with success, and are carried on to advantage; but they are generally such as require only a few hands, or wherein great part of the work is performed by machines. Goods that are bulky, and of so small value as not well to bear the expense of freight, may often be made cheaper in the country than they can be imported; and the manufacture of such goods will be profitable wherever there is a sufficient demand. The farmers in America produce indeed a good deal of wool and flax; and none is exported, it is all worked up; but it is in the way of domestic manufacture, for the use of the family. The buying up quantities of wool and flax, with the design to employ spinners, weavers, &c., and form great establishments, producing quantities of linen and woollen goods for sale, has been several times attempted in different provinces; but those projects have generally failed, goods of equal value being imported cheaper. And when the governments have been solicited to support such schemes by encouragements, in money, or by imposing duties on importation of such goods, it has been generally refused, on this principle, that, if the country is ripe for the manufacture, it may be carried on by private persons to advantage; and if not, it is a folly to think of forcing nature. Great establishments of manufacture require great numbers of poor to do the work for small wages; those poor are to be found in Europe, but will not be found in America, till the lands are all taken up and cultivated, and the excess of people, who cannot get land, want employment. The manufacture of silk, they say, is natural in France, as that of cloth in England, because each country produces in plenty the first material; but if England will have a manufacture of silk as well as that of cloth, and France of cloth as well as that of silk, these unnatural operations must be supported by mutual prohibitions, or high duties on the importation of each other's goods; by which means the workmen are enabled to tax the home consumer by greater prices, while the higher wages they receive makes them neither happier nor richer, since they only drink more and work less. Therefore the governments in America do nothing to encourage such projects. The people, by this means, are not imposed on, either by the merchant or mechanic. If the merchant demands too much profit on imported shoes, they buy of the shoemaker; and if he asks too high

a price, they take them of the merchant; thus the two professions are checks on each other. The shoemaker, however, has, on the whole, a considerable profit upon his labor in America, beyond what he had in Europe, as he can add to his price a sum nearly equal to all the expenses of freight and commission, risk or insurance, &c., necessarily charged by the merchant. And the case is the same with the workmen in every other mechanic art. Hence it is, that artisans generally live better and more easily in America than in Europe; and such as are good economists make a comfortable provision for age, and for their children. Such may, therefore, remove with advantage to America.

In the long-settled countries of Europe, all arts, trades, professions, farms, &c., are so full, that it is difficult for a poor man, who has children, to place them where they may gain, or learn to gain, a decent livelihood. The artisans, who fear creating future rivals in business, refuse to take apprentices, but upon conditions of money, maintenance, or the like, which the parents are unable to comply with. Hence the youth are dragged up in ignorance of every gainful art, and obliged to become soldiers, or servants, or thieves, for a subsistence. In America, the rapid increase of inhabitants takes away that fear of rivalship, and artisans willingly receive apprentices from the hope of profit by their labor, during the remainder of the time stipulated, after they shall be instructed. Hence it is easy for poor families to get their children instructed; for the artisans are so desirous of apprentices, that many of them will even give money to the parents, to have boys from ten to fifteen years of age bound apprentices to them till the age of twenty-one; and many poor parents have, by that means, on their arrival in the country, raised money enough to buy land sufficient to establish themselves, and to subsist the rest of their family by agriculture. These contracts for apprentices are made before a magistrate, who regulates the agreement according to reason and justice, and, having in view the formation of a future and useful citizen, obliges the master to engage by a written indenture, not only that, during the time of service stipulated, the apprentice shall be duly provided with meat, drink, apparel, washing, and lodging, and, at its expiration, with a complete new suit of clothes, but also that he shall be taught to read, write, and cast accounts; and that he shall be well instructed in the art or profession of his master, or some other, by which he may afterwards gain a livelihood, and be able in his turn to raise a family. A copy of this indenture is given to the apprentice or his friends, and the magistrate keeps a rec-

ord of it, to which recourse may be had, in case of failure by the master in any point of performance. This desire among the masters, to have more hands employed in working for them, induces them to pay the passages of young persons, of both sexes, who, on their arrival, agree to serve them one, two, three, or four years; those, who have already learned a trade, agreeing for a shorter term, in proportion to their skill, and the consequent immediate value of their service; and those, who have none, agreeing for a longer term, in consideration of being taught an art their poverty would not permit them to acquire in their own country.

The almost general mediocrity of fortune that prevails in America obliging its people to follow some business for subsistence, those vices, that arise usually from idleness, are in a great measure prevented. Industry and constant employment are great preservatives of the morals and virtue of a nation. Hence bad examples to youth are more rare in America, which must be a comfortable consideration to parents. To this may be truly added, that serious religion, under its various denominations, is not only tolerated, but respected and practised. Atheism is unknown there; infidelity rare and secret; so that persons may live to a great age in that country, without having their piety shocked by meeting with either an atheist or an infidel. And the Divine Being seems to have manifested his approbation of the mutual forbearance and kindness with which the different sects treat each other, by the remarkable prosperity with which He has been pleased to favor the whole country.

WINTERBOTHAM

William Winterbotham was born in London in 1763. In 1785 he began to preach for the Calvinist Methodists, and in 1789 became a Baptist. November 5 and 18, 1792, he preached two sermons in favor of Democracy and was tried for sedition, fined £200 and imprisoned for two years. During this time he wrote his "View of the American United States."

This is largely a careful compilation, very often with the words

unchanged, from contemporary sources, many of which are not now easily accessible.

He died March 31, 1829.

OF THE PROSPECTS AND ADVANTAGES OF AN EUROPEAN SETTLER IN THE UNITED STATES

Before we enter on this part of the work, we wish to premise to the reader that we shall proceed with caution. The numbers that have emigrated to America from this country have already awakened the fears of some, and the envy of others; and some who appear conscious of the consequences that must follow from a spirit of emigration, have thought it their duty to step forward, and by magnifying trifling difficulties into insurmountable obstacles, attempt to put a stop to a system, which, though its effects are slow, are not the less sure in weakening the strength and resources of the European countries. Hence slight skirmishes with the Indians have been magnified to the most tremendous battles. The resistance of a small portion of persons to the levying of a tax in one or two States has been worked up to a universal rebellion throughout the Union. A fever raging at Philadelphia for a short period, and which is now admitted to have originated in the exposure of damaged coffee, has been held forth as a proof of an unhealthy climate throughout the States; and the intemperate zeal of a few individuals has been considered a sufficient proof that the whole body of Americans are averse to the prudent and temperate conduct of their government. The impressions made on the public mind by these means have received additional strength from a few individuals, who, like the spies sent to view the land of Canaan, have, through idleness, or attachment to European dissipation, cast away the clusters of grapes, and returned with an evil report of the land. If we credit those, the United States are ruined—trade is bad—every thing is dear— all is confusion—the people slaves—and the United States unable to furnish employment or support to those who wish there to take up their residence. These, and almost ten thousand other evils are conveyed to us through the medium of letters inserted in the daily papers dated from different parts of America, but which carry with them internal evidence of being the production of hireling scribblers, employed for the purpose of misleading the unthinking mind.

In order therefore to follow this subject through all its connec-

tions, and to set the prospects of an European settler in a clear point of view, it will be necessary to proceed in the inquiry under some kind of system, that its different parts may stand clear and distinct, and yet form one connected whole. As an introductory part it may therefore be necessary to rectify some mistaken notions of Europeans respecting the American States.

Mistaken Notions of Europeans

Many persons in Europe appear to have formed mistaken ideas and expectations of what is to be obtained in America; it may therefore be useful, and prevent inconvenient, expensive, and fruitless removals and voyages of improper persons, to give some clear and truer notions of that part of the world than appear to have hitherto prevailed.

It is imagined by numbers that the inhabitants of North America are rich, capable of rewarding, and disposed to reward all sorts of ingenuity; that they are at the same time in a great degree ignorant of all the sciences; and consequently that strangers possessing talents in the *belles lettres,* fine arts, etc., must be highly esteemed, and so well paid as to become easily rich themselves; that there are also abundance of profitable offices to be disposed of, which the natives are not qualified to fill; and that having few persons of family among them, strangers of birth must be greatly respected, and of course easily obtain the best of those offices, which will make all their fortunes; that the governments, too, to encourage emigrations from Europe, not only often pay the expense of personal transportation, but give land gratis to strangers, with negroes to work for them, utensils of husbandry and flocks of cattle. These are, in the general, wild imaginations; and those who go to America with expectations founded upon them will surely find themselves disappointed.

[The part here omitted is taken practically word for word from Franklin, as given above.]

Motives to Emigration

If the above observations are considered as true, it may naturally be asked, What are the general inducements to quit Europe for the purpose of settling in America?

To this query we shall, without hesitation, reply, that the first and principal inducement to an European to quit his native country for America, is the total absence of anxiety respecting the future success

of a family. There is little fault to find with the government of America, either in principle or in practice; they have very few taxes to pay, and those are of acknowledged necessity and moderate in amount; they have no animosities about religion; it is a subject about which no questions are asked; they have few respecting political men or political measures; the present irritation of men's minds in Great Britain, and the discordant state of society on political accounts, is not known there. The government is the government of the people, and for the people. There are no tithes nor game laws; and excise laws upon spirits only, and similar to the British only in name. There are no men of great rank, nor many of great riches. Nor have the rich there the power of oppressing the less rich, for, as we have before observed, poverty, such as is common in Great Britain, is almost unknown; nor are their streets crowded with beggars; Mr. Cooper observes, he saw but only one while he was there, and that was an Englishman. You see nowhere in America the disgusting and melancholy contrast, so common in Europe, of vice, and filth, and rags, and wretchedness, in the immediate neighbourhood of the most wanton extravagance, and the most useless and luxurious parade. Nor are the common people so depraved as in Great Britain. Quarrels are uncommon, and boxing matches unknown in their streets. They have no military to keep the people in awe, nor hired spies and informers to pierce the inmost recesses of society, and to call forth one part of a family against another; thus destroying domestic quiet and public happiness. Robberies are very rare. There was not a burglary in Philadelphia during the fever there, though no one stayed in the town who could leave it. All these are real advantages; but great as they are, they do not weigh with us so much as the single consideration first mentioned.

In England the young man flies to prostitution, for fear of the expense of a family establishment, and the more than probable extravagance of a wife; celibacy is a part of prudence; it is openly commended, and as steadily practiced as the voice of nature will allow. The married man, whose passions have been stronger, whose morals have been less callous, or whose interest has furnished motives to matrimony, doubts whether each child be not a misfortune, and looks upon his offspring with a melancholy kind of affection, that embitters some of the otherwise most pleasurable moments of his life. There are exceptions to this from great success in the pursuits of the father; there are exceptions from stronger degrees of parental affection; and the

more sanguine look forward with stronger hope; but we have seen too much not to be satisfied of the perfect truth of this general position. We do not care what may be the situation in life of the parents, or the rank to which they belong; from the labourer at six or seven shillings per week, and many thousands of such there are in Great Britain, to the peer of twenty-five thousand pounds per annum, through many intermediate ranks, we have had too frequent occasion to observe this melancholy fact.

In the former instance, the labourer consoles himself, with tears in his eyes, for the loss of his children, because he has one or more less to provide for; and in the second instance, his lordship retrenches his pleasures because he has a large family.

In America, particularly out of the large towns, no man of moderate desires feels anxious about a family. In the country, where the mass of the people dwell, every man feels the increase of his family to be the increase of his riches; and no farmer doubts about the facility of providing for his children as comfortably as they have lived, where land is so cheap and so fertile, where society is so much on an equality, and where the prodigious increase of population, from natural and accidental causes, and the improving state of every part of the country, furnishes a market for whatever superfluous produce he chooses to raise, without presenting incessantly that temptation to artificial expense and extravagant competition so common and so ruinous in European countries.

In Great Britain perpetual exertion, incessant, unremitting industry, daily privation of the comforts of life, and anxious attention to minute frugality, are almost incumbent on a man of moderate fortune, and in the middle class of life: and the probabilities of ultimate success are certainly against a large family. In England no man has a right, calculating upon the common chances, to expect that five or six children shall all succeed, however virtuous or industrious they may be.

In America it is otherwise; you may reasonably reckon upon a comfortable settlement, according to your situation in life, for every part of a family, however numerous. There is nothing in European countries equivalent to the taking off this weight upon the mind of a father of a family. It is felt in the occurrences of every day. Mr. Cooper remarks, he has seen with pleasure the countenance of an European emigrant, in America, brighten up on this very comfortable reflec-

tion; a reflection which consoles even for loss of friends, and exile from a native country.

To persons in genteel life, and of the class which we call men of fortune, nearly the same difficulties occur: with us every rank treads so close on the heels of the rank above it, that an excess of expense above income is general; and perhaps the difficulties of a family are still greater in the class last mentioned. Temptations to unnecessary expense, owing to the numerous gradations of rank in England, are perpetual and almost unconquerable. With the Americans, man is more equitably appreciated; he is estimated more at what he is, and less at what he seems. Something like European manners, and something of the ill effect of inequality of riches, may indeed be found in the great towns of America, but nothing like what an inhabitant of the old country experiences; and the mass of the people in America are nearly untainted. Hence the freedom from artificial poverty, and the universal diffusion of the common comforts and conveniences of life.

In England, if a man has been pecuniarily unfortunate, the eager crowd press on and trample over him, and, once down, he is kept down. In America, a false step is not irretrievable, there is room to get up again; and the less unfortunate stumbler looks round at leisure, and without dismay, for some more profitable path to be pursued. In England, every employment is full; we are pressed and elbowed on all sides: in America every employment has room for industry, and for many years almost every species of industry must be successful. In fine, America is a rising country, but there is cause to fear that most of the European countries are going fast to ruin and decay.

In America the expenses of the government are very much less, in proportion to wealth and numbers, than those of any nation in Europe.

There is no land tax among the national revenues, nor is there any interior tax, or excise upon food, drink, fuel, lights, or any native or foreign manufacture, or native or foreign production, except a duty of about four pence sterling on domestic distilled spirits. The greatest part of the public burdens are paid by an import duty on foreign goods, which being drawn back on exportation, it remains only on what is actually used, and is in that view the lowest in the world. In England there is scarce an article that an individual can eat, drink or wear, but what is taxed double, treble, and sometimes more than what was its original intrinsic value.

Trade has been encouraged by a drawback of all the import duty

on foreign goods, when they are exported, excepting only a very few commodities of a particular nature, which are not desired to be much imported to, or consumed in, the United States.

A national mint is established under the direction of the ablest practical man in the arts and sciences which America affords, David Rittenhouse. It is provided by law that the purity and intrinsic value of the silver coins shall be equal to that of Spain, and of the gold coins to those of the strictest European nations. The government of the United States foregoes all profit from the coinage; this is certainly an honest, a politic and a wholesome forbearance, but America is the first that has adopted it.

The banks established in the several cities of Philadelphia, New York, Boston, Baltimore, Charleston, Alexandria, etc., divide a profit of seven and a half to eight and a half per cent per annum at present, which is paid half-yearly. The interest of the public debt of the United States is paid every quarter of a year with a punctuality absolute and perfect. There is no tax on property in the funds and banks.

The shipbuilding of the United States has been on the increase ever since the revolution; it was greater in the year 1793 than in any former year since the settlement of the country, and it is greater in the current year than it was in the last. Generally speaking, the art of shipbuilding was never so well understood, never so well executed, nor was there ever a time when so many of the manufactures requisite for the furniture, tackle, apparel, and arming of vessels, were made in the United States.

The value of the manufactures of the United States is certainly greater than double the value of their exports in native commodities, and much greater than the gross value of all their imports, including the value of goods exported again.

These manufactures consist generally of articles of comfort, utility and necessity. Articles of luxury, elegance and show are not manufactured in America, excepting a few kinds. Manufactures in general have increased very rapidly since the commencement of the revolution war, and particularly in the last five years.

The exports of the United States have increased in the last three years from fourteen to twenty per cent. These exports consist, in a great degree, of the most necessary food of man, of working animals, and of raw materials, applicable to manufactures of the most general utility and consumption.

The exports of the United States are six times the amount of the national taxes and duties; and the amount of the outward freight of the ships and vessels of the United States, at this time, is probably more than equal to all their national taxes and duties. The inward freight is considerable. The earnings of the fishing vessels, in lieu of freight, are also considerable. But the coasting freights are greater in value than both the last.

All ships and vessels depart from the United States, fully laden, excepting a part of the East India traders; and a large quantity of tonnage is employed in the coasting trade; and a considerable quantity in the cod and whale fisheries.

The imports of the United States are less in value than the exports, deducting the outward freights of their own ships, which are returned in goods, the net sales of their ships to foreigners, and the property imported by migrators from foreign countries.

The very great proportion of the imports, which consists of manufactures from raw materials, which America can produce, affords constant and inviting opportunities to lessen the balance against the United States in their trade with foreign countries, holds out a certain home market to skilful and industrious manufacturers in America, and gives the most flattering expectations to the landholder and farmer, of a very increasing demand for his produce, in which he cannot be deceived.

Their imports have not been swelled in proportion to the increase of their population and wealth. The reason is clear, viz.: the constant introduction of new branches of manufacture amongst themselves, and a great extension of the old branches.

Their imports for consumption are composed of manufactures in a much less proportion than heretofore, owing to the same two causes.

The imports of the United States have almost ceased to exhibit certain articles of naval and military supply, and others of the greatest utility and consumption, owing also to the same two causes.

Their imports consist but in a small degree of necessaries, in a great degree of articles of comfortable accommodations, and in some degree of luxuries; but their exports consist chiefly of prime necessaries, of the utmost importance to Europeans, with some articles of mere comfort and utility, and some of luxury. The following will be found to be the quantities of some of the principal articles of exportation from the United States during the year ending September, 1792:

3,145,255 Bushels of grain and pulse, principally wheat, Indian corn, rye, beans and peas.
44,752 Horses, horned cattle, mules, hogs and sheep.
1,469,723 Barrels of flour, meal, biscuit and rice, reducing casks of various sizes to the proportion of flour barrels.
146,909 Barrels of tar, pitch, turpentine and rosin.
116,803 Barrels of beef, pork, mutton, sausages, oysters, tripe, etc., reducing casks of various sizes to the proportion of beef and pork barrels.
231,776 Barrels of dried and pickled fish, reducing them to barrels of the same size.
948,115 Gallons of spirits, distilled in the United States.
7,823 Tons, 12 cwts. and 14 lb of pearl and pot ashes.
112,428 Hogsheads of tobacco.
60,646,861 Feet of boards, plank and scantling.
19,391½ Tons of timber.
18,374 Pieces of timber.
1,080 Cedar and oak ship knees.
71,693,863 Shingles.
31,760,702 Staves and hoops.
191 Frames of houses.
73,318 Oars, rafters for oars, and handspikes.
48,860 Shook or known-down casks.
52,381 Hogsheads of flaxseed.

The exports of the year, of which the above are a part, amounted to twenty-one millions of dollars; but the exports of the next following year, ending on September 30, 1793, amounted to five millions more, being twenty-six millions of dollars. Provisions and raw materials have greatly increased. Of flour alone there were shipped one million and thirteen thousand of casks.

The imports of the United States are now generally brought directly, and not circuitously, from the countries which produced or manufactured them. China, India proper, the isles of Bourbon and Mauritius, Good Hope, the southern settlements of America and West Indies, the Wine islands, and the countries on the Mediterranean and Baltic seas, Great Britain and Ireland, France, the Netherlands and Germany, Spain and Portugal.

Thus their commerce is diversified and prosperous, and consists in importing for their own consumption, and for exportation, in the ex-

porting, the coasting and inland trades, the Indian trades, manufactures, shipping, the fisheries, banking, and insurances on ships, cargoes and houses. There is no branch of commerce, foreign or domestic, in which every district, city, port and individual is not equally entitled to be interested.

The commanders and other officers of American ships are deemed skilful and judicious; from which cause, combined with the goodness of their ships and of their equipment, insurances upon their vessels are generally made in Europe, upon the most favourable terms, compared with the corresponding risks on board of the vessels of other nations.

The lawful interest of money is six per cent per annum, in most of the States; in a few it is seven per cent; in one it is five per cent.

The poor taxes in the United States are very small, owing to the facility with which every man and woman, and every child, who is old enough to do the lightest work, can procure a comfortable subsistence. The industrious poor, if frugal and sober, often place themselves in a few years above want.

Horses and cattle, and other useful beasts, imported for breeding, are exempted by law from the import duty.

The clothes, books, household furniture, and the tools or implements of their trade or profession, brought by emigrators to America, are exempted from the import duty, and they may begin their commerce, manufactures, trade or agriculture, on the day of their arrival, upon the same footing as a native citizen; and there is no greater nor other tax upon foreigners or their property in the United States, than upon native citizens.

Almost every known Christian church exists in the United States; as also the Hebrew church. There has not been a dispute between any two sects or churches since the revolution. There are no tithes; marriage and burial fees, glebes, land rents, pew rents, moneys at interest and voluntary contributions are the principal means of supporting the clergy. Many of them are also professors and teachers in the universities, colleges, academies and schools, for which interesting stations, pious and learned ministers of religion are deemed peculiarly suitable. There is no provision in the Episcopal, Presbyterian, or Independent church for any clerical person or character above a rector or minister of the gospel; and this is generally, if not universally the case. There are some assistant ministers, but no curates or vicars.

All the lands in the United States are free from tithes, and the

medium purchase is not equal to the annual land rents of Europe; even including in the estimate the value of the old improved farms in America, and the great mass of unimproved lands.

The productions and manufactures of military supplies and articles enable the United States to derive from their own resources, ships of war, gunpowder, cannon and musket balls, shells and bombs, cannon and carriages, rifles and cutlasses, grapnals, iron, lead, cartridge boxes, sword belts, cartridge paper, saddles, bridles, and holsters, soldiers' and sailors' hats, buckles, shoes, and boots, leathern breeches, naval stores, sheathing paper, malt and spirituous liquors, manufactured tobacco, soap, candles, lard, butter, beef, pork, bacon, hams, peas, biscuit and flour, and other articles for the land or marine service.

The education of youth has engaged a great share of the attention of the legislature of the States. Night schools for young men and boys, who are employed at labour or business in the daytime, have been long and beneficially supported, and the idea of Sunday schools has been zealously adopted in some places. Free schools for both sexes have been increased, and greater attention than heretofore is paid to female education.

The people of the United States are ingenious in the invention, and prompt and accurate in the execution of mechanism and workmanship, for purposes in science, arts, manufactures, navigation and agriculture. Rittenhouse's planetarium, Franklin's electrical conductor, Godfrey's quadrant improved by Hadley, Rumsey's and Fitch's steam engines, Leslie's rod pendulum, and other horological inventions, the construction of ships, the New England whaleboat, the construction of flour mills, the wire-cutter and bender for card makers, Folsom's and Briggs' machinery for cutting nails out of rolled iron, the Philadelphia dray with an inclined plane, Mason's engine for extinguishing fire, the Connecticut steeple clock, which is wound up by the wind, the Franklin fireplace, the Rittenhouse stove, Anderson's threshing machine, Rittenhouse's instrument for taking levels, Donnaldson's Hippopotomas and balance lock, are a few of the numerous examples.

There is no description of men in America, and there are very few individuals in the active time of life, who live without some pursuit of business, profession, occupation, or trade. All the citizens are in active habits, and all capital stock is kept in action.

No country of the same wealth, intelligence, and civilization, has so few menial servants, strictly speaking, in the families of persons of the

greatest property. Family servants and farming servants, who emigrate from Europe, and who continue soberly and industriously in family or farm service for one, two, or three years, commonly find opportunities to better their situations by getting into some comfortable line of dealing, or trade, or manufacturing, or farming, according to their education, knowledge and qualifications.

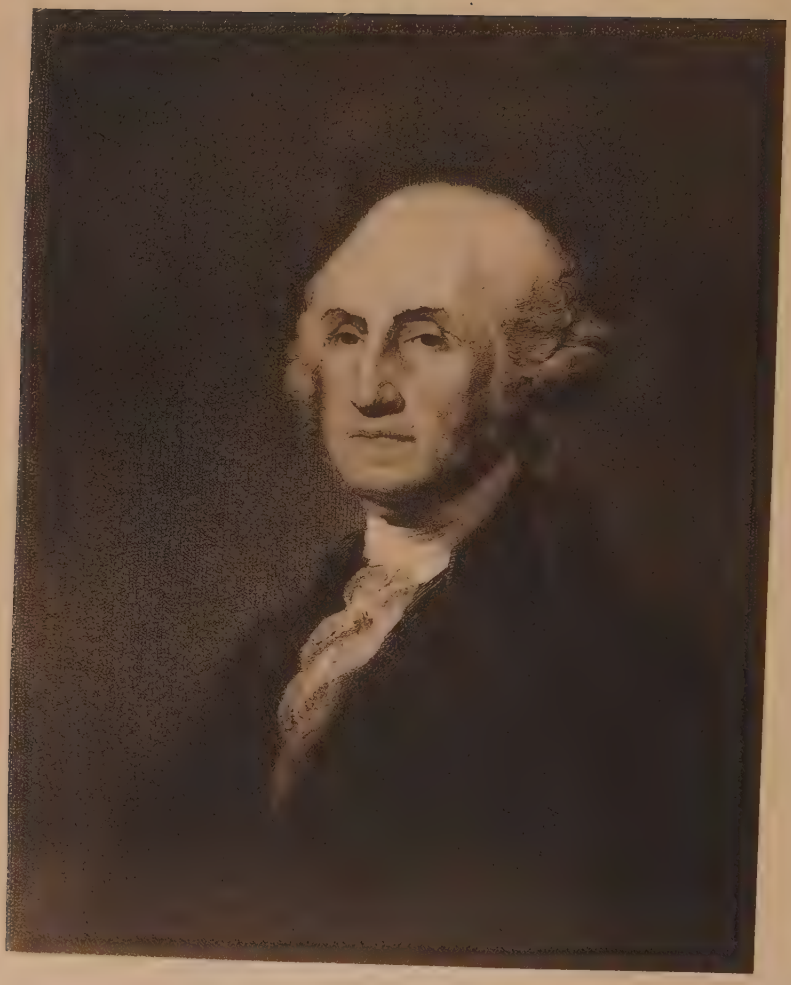
America has not, indeed, many charms for the dissipated and voluptuous part of mankind, but very many, indeed, for the rational, sober-minded and discreet. It is a country which affords great opportunities of comfort and prosperity to people of good property, and those of moderate property, and to the industrious and honest poor: a singular and pleasing proof of which last assertion is, that there are very few, if any, day labourers in the city and liberties of Philadelphia, of the Quaker church. That religious society is very numerous; but the sobriety, industry, and frugality which they practice, enables their poor quickly to improve their condition, in a country so favourable to the poorest members of the community.

That part of the tradesmen and manufacturers who live in the country generally reside on small lots and farms, of from one acre to twenty, and not a few upon farms of twenty to one hundred and fifty acres, which they cultivate at leisure times with their own hands, their wives, children, servants, and apprentices, and sometimes by hired labourers, or by letting out fields for a part of the produce to some neighbour, who has time or farm hands not fully employed. This union of manufactures and farming is found to be very convenient on the grain farms, but it is still more convenient on the grazing and grass farms, where parts of almost every day, and a great part of every year, can be spared from the business of the farm, and employed in some mechanical, handicraft, or manufacturing business. These persons often make domestic and farming carriages, implements, and utensils, build houses and barns, tan leather, manufacture hats, shoes, hosiery, cabinet work, and other articles of clothing and furniture, to the great convenience and advantage of the neighbourhood. In like manner some of the farmers at leisure times and proper seasons, manufacture nails, pot ash, pearl ash, staves and heading, hoops and handspikes, axe handles, maple sugar, etc. The most judicious planters in the southern states are industriously instructing their negroes, particularly the young, the old, the infirm, and the females, in manufactures.

A large proportion of the most successful manufacturers in the

United States are persons who were journeymen, and in some instances foremen in the workshops and manufactories of Europe, who, having been skilful, sober and frugal, and having thus saved a little money, have set up for themselves with great advantage in America, and few have failed to succeed.

From this brief sketch we may justly draw this conclusion, that the advantages America offers to European emigrants are such as no country beside can hold forth.



THE DEVELOPMENT OF POLITICAL IDEAS IN THE UNITED STATES

THE SITUATION of the United States even after the adoption of the new Constitution was extremely critical. The Continental Congress had had so little power that it had not been able to raise money to pay its debts, and it had practically no credit whatever. In 1784 Amsterdam bankers had refused to lend it the trifling sum of $300,000. The states themselves had to borrow money to help carry on the war, and were as unable to pay as the general government. The total national and state debts amounted to $70,000,000. Paper money and notes were worthless. The state courts disagreed. Congress was unattended. Everything was disorganized.

Perhaps the only act of the Continental Congress which had strengthened the union of the colonies since the war was the acceptance of the great Northwest Territory from Virginia, Massachusetts, New York, and Connecticut, and the legislation providing for its territorial government (1787). The ordinance provided for the details of the government of the territory, against primogeniture, and that the lands north of the Ohio and east of the Mississippi should be used to form only free states. This territory gave the states something in common, and the new nation a vast property to hold in trust for its future inhabitants.

The organizer in Washington's cabinet was Alexander Hamilton. He believed in the strongest possible national government, and his measures were most of them directed to strengthening the central power. Under his leadership the government assumed the debts of the Continental Congress, and even went so far as to assume the state debts,

This was for the double purpose of establishing credit and getting the creditors, who would thus look to the nation for payment, to favor any increase in power necessary to pay them.

In order to meet these debts he established the policy of a tariff on imports. This was made at the same time protective to home manufactures. Even here it is probable that Hamilton saw he would be creating a class interest in favor of the government. He put, moreover, an excise tax on whisky, and collected it in spite of riots and threats. He established a national bank, and in return for support for it from the South, gave his aid to the selection of the site for the new capital on the Potomac.

These measures raised a protest from the men like Jefferson who thought he was infringing too much on the rights reserved to the people and hence to the states, and two parties came into existence, the Federalist led by Hamilton and Adams, and the anti-Federalist, afterward called the Republican and later the Democratic, led by Jefferson and Madison.

The first ten amendments to the Constitution were passed through the influence of the Republicans in 1793. These constituted practically a bill of rights.

In 1792 the French Republic sprang into life. The Republicans in America gave a ready sympathy to its sentiments of equality and fraternity. War broke out between France and England. The Federalists favored England, the Republicans France. Genet came as ambassador from France and made himself unpopular by practically demanding aid.

Jefferson, who was out of touch with the policy of the administration, resigned from the cabinet, January 1, 1794, and two years later contested the election against John Adams. After a campaign of violent invective, especially from the Republicans against the love for England and the supposed monarchical designs of the Federalists, Adams was elected and took his seat in 1797.

The French Directory had been enraged at Jay's treaty with England, and broke off intercourse with the United States. An embassy sent from the United States to renew friendly relations were met with a demand for money. Indignation blazed up in America and war was prepared for and on the sea actually begun. Party feeling rose to a high pitch. Because of the insolence of Genet and other French aliens in the country, the Federalists passed the Alien act, giving the President power to imprison or banish aliens considered dangerous; and because of the

virulence of the press, they passed the Sedition act, punishing by fine or imprisonment false, scandalous, or malicious publications against the President or either House of Congress. The Republicans clamored that both laws were infractions of individual rights. Jefferson, fearful the national government was developing into a tyranny, went to the other extreme and framed the Kentucky Resolutions (1798), looking to interposition by the states to protect the individual. Virginia also passed resolutions framed by Madison to the same general purport. The other states either rejected them or neglected acting on the matter, but the idea that the Union was a compact subject to the interposition of each member, or, as Madison claimed, of three-fourths the states, afterward became the center of the doctrine of nullification.

In the election of 1800 the general indignation against the Alien and Sedition laws and the uprising of the people against the aristocratic class, with which they had begun to associate the Federalist party, gave the presidency to Jefferson. This marks the beginning of the rule of the common people.

The leaders of the new party were Jefferson; his Secretary of State, Madison; and the Secretary of the Treasury, Gallatin. There was no great leader in the Senate for some years after the death of John Breckinridge of Kentucky. The leaders in the House were such political managers as Varnum of Massachusetts and Vilas of Virginia.

The first important act of Jefferson as President was to lay aside his views of the strict construction of the Constitution in order to purchase Louisiana. The purchase raised considerable dissatisfaction among the Federalists in the Eastern States. In the absence of the railroad and the telegraph it seemed that this would throw the seat of power a practically impassable distance toward the West.

The Federalist party was on the wane and Madison received 129 electoral votes against 47 for Cotesworth Pinckney (1808).

The great war between Napoleon and his enemies was on and American commerce was being ruined by the restrictions each rival laid against neutral trade with the other. In addition to this, England was continually impressing our seamen. The United States had ample justification to declare war against both France and England. The new party leaders, Henry Clay of Kentucky, Calhoun of South Carolina, and Crawford of Georgia, practically drove the administration to declare war against England in the hopes of conquering Canada.

Madison was re-elected on the war issue by 218 electoral votes

against 128 given to DeWitt Clinton, who had been nominated by a part of the Republicans and supported b the Federalists.

The war began with disaster on land and glory on the sea. For a time it seemed as if we might lose the Northwest territory. The government was afraid to tax and could not borrow. In 1815 government loans were at a discount of 40%. The majority of the banks suspended specie payments. New England was generally against the war; its militia refused to go outside of their respective states and some of the governors refused to furnish militia at all. The more discontented of the Federalists met at the Hartford convention and broke the old principles of the party by favoring state sovereignty (1814).

The victories on Lake Erie and Lake Champlain and at New Orleans closed the war with the moral result in favor of the United States.

Monroe in 1816 received 187 electoral votes against 34 given by the remnant of the Federalists to Rufus King, and in 1820 was reelected without an opposing candidate. In 1819 Florida was purchased, and in 1823 Monroe served notice to the world that America was no longer a field for European colonization.

In the meantime the Republican party itself was beginning to break up into sections. Henry Clay and John Quincy Adams became the leaders of the so-called "American policy" of internal improvement and a higher protective tariff to growing manufactures. The Southern Republicans who represented the older section of the party rallied around Crawford until his paralysis in 1823, then for a time joined forces with Andrew Jackson and finally turned to Calhoun.

About 1820 the question of slavery came to be of some importance. Hitherto in admitting new states into the Union a close balance had been kept between the Northern and Southern states, but in 1820 both Maine and Missouri were ready for admission. Maine was, of course, to be a free state; Missouri was mostly above the point where the Ohio joined the Mississippi and might also well be made a free state. The invention of the cotton gin vastly increased the value of cotton land and slave labor and made the extension of slavery important to the South. Henry Clay, who became the embodiment of the spirit of compromise, settled the difficulty for a time by getting passed the compromise of 1820, admitting Missouri as a slave state, but henceforth forbidding slavery north of the southern boundary of Missouri.

The principal candidates for the presidency in 1824 were Adams

and Clay of the New Republicans, Crawford of the Old Republicans, nominated by a congressional caucus, and Andrew Jackson, nominated by the state legislature of Tennessee. Jackson had 99 votes, Adams 84, Crawford 41, and Clay 37. This threw the election into the House and the Clay men, voting for Adams, elected him.

The fact that Jackson had had the greatest number of electoral votes immediately gave him great prominence. He became the leader of the common people. Among his lieutenants were Benton and Van Buren. One mark of the growing popularization of power was his successful attacks against the choice of presidential electors by the state legislatures. His growing popularity gave him 178 electoral votes in 1828, against 83 for Adams. Calhoun had been Vice-President with Adams and was re-elected with Jackson.

Jackson swept out the office-holders in the civil service and appointed his own adherents. The influence of the new democracy brought in county, district and state conventions. The president vetoed the bill to recharter the National bank and bills favoring protection and internal improvements. He quarreled with Calhoun and estranged the southern element of his party. In 1832 the National Republicans nominated Clay, but the New Democratic Republicans re-elected Jackson.

The high tariff of 1828 aroused intense dissatisfaction in the South. Hayne and Calhoun developed the old Jeffersonian idea that a state could interpose its veto to nullify an act of Congress within its borders. Marshall in the Supreme Court and Webster in the Senate strengthened the foundation for the supremacy of the general government by developing the idea that the Supreme Court is the final arbiter of all questions between two states or a state and the nation. South Carolina passed the ordinance of nullification November 19th, 1832, but Jackson, although he was no friend of the tariff or internal improvement, and although he was supposed to belong to a strict construction party, immediately gave warning that he would enforce the laws with all of the National power. The nullification ordinance was suspended by an unofficial meeting of leading nullifiers and the South was pacified by the compromise tariff of 1833. We must leave the further development of political ideas in the United States to the following volume.

ALEXANDER HAMILTON

ALEXANDER HAMILTON was born on the island of Nevis, in the West Indies, January 11th, 1757. In 1772 he came to New York and the next year entered King's college. Although not yet twenty, his pamphlets in favor of the rights of the colonies attracted considerable attention. At the opening of the war he studied military tactics and was appointed a captain of artillery. In 1777 Washington made him his *aide-de-camp*. At Yorktown at the head of a battalion he took one of the redoubts by assault.

From 1783 to 1787 he was busy practicing law in New York. In the latter year he went as a delegate to the Federal convention. He would have preferred a president and senators elected for life, but so much strength was infused into the new Constitution that he gave it his hearty support in the articles written by him for "The Federalist," and before the New York convention.

He was the best representative of the Federalist party. His organization of the new government showed a statesmanship that has seldom been equaled. He brought forth strength out of weakness, unity out of disintegration, credit out of bankruptcy, industrial growth out of stagnation, and confidence out of despair. He inaugurated protection, a National bank, and assumed the confederate and state debts.

In 1795 Hamilton resigned from the cabinet to again practice law, but in 1798 was made second to Washington in command of the army organized in expectation of war with France, and the next year commander-in-chief.

Hamilton's opposition to the sending of an embassy to France by President Adams in 1799 occasioned a break in the Federalist party that helped let in the Republicans in 1800. When the election was thrown into the House Hamilton urged the choice of Jefferson as against the other Republican candidate, Aaron Burr. Again in 1804 he opposed Burr for the governorship of New York on the ground that Burr was not a safe man. This brought upon Hamilton Burr's deadly

hatred. Burr challenged him to a duel and Hamilton was killed at Weehawken July 12, 1804.

Though he was not as close to the people as either Jefferson or Lincoln, he is probably the greatest constructive genius among the American statesmen.

THE POWERS OF THE SUPREME COURT

A further view of the judicial department, in relation to the extent of its powers.

To judge with accuracy of the due extent of the federal judicature, it will be necessary to consider, in the first place, what are its proper objects.

It seems scarcely to admit of controversy, that the judiciary authority of the union ought to extend to these several descriptions of cases: 1st. To all those which arise out of the laws of the United States, passed in pursuance of their just and constitutional powers of legislation: 2d. To all those which concern the execution of the provisions expressly contained in the articles of union: 3d. To all those in which the United States are a party: 4th. To all those which involve the peace of the confederacy, whether they relate to the intercourse between the United States and foreign nations, or to that between the states themselves: 5th. To all those which originate on the high seas, and are of admiralty or maritime jurisdiction: and, lastly, to all those in which the state tribunals cannot be supposed to be impartial and unbiased.

The first point depends upon this obvious consideration, that there ought always to be a constitutional method of giving efficacy to constitutional provisions. What, for instance, would avail restrictions on the authority of the state legislatures, without some constitutional mode of enforcing the observance of them? The states, by the plan of the convention, are prohibited from doing a variety of things; some of which are incompatible with the interests of the union; others, with the principles of good government. The imposition of duties on imported articles, and the emission of paper money, are specimens of each kind. No man of sense will believe, that such prohibitions would be scrupulously regarded, without some effectual power in the government to restrain or correct the infractions of them. This power must either be a direct negative on the state laws, or an authority in the federal courts

to overrule such as might be in manifest contravention of the articles of union. There is no third course that I can imagine. The latter appears to have been thought by the convention preferable to the former, and, I presume, will be most agreeable to the states.

As to the second point, it is impossible, by any argument or comment, to make it clearer than it is in itself. If there are such things as political axioms, the propriety of the judicial power of a government being coextensive with its legislative, may be ranked among the number. The mere necessity of uniformity in the interpretation of the national laws, decides the question. Thirteen independent courts of final jurisdiction over the same causes, arising upon the same laws, is a hydra in government, from which nothing but contradiction and confusion can proceed.

Still less need be said in regard to the third point. Controversies between the nation and its members, or citizens, can only be properly referred to the national tribunals. Any other plan would be contrary to reason, to precedent, and to decorum.

The fourth point rests on this plain proposition, that the peace of the whole ought not to be left at the disposal of a part. The union will undoubtedly be answerable to foreign powers for the conduct of its members. And the responsibility for an injury ought ever to be accompanied with the faculty of preventing it. As the denial or perversion of justice by the sentences of courts, is with reason classed among the just causes of war, it will follow, that the federal judiciary ought to have cognizance of all causes in which the citizens of other countries are concerned. This is not less essential to the preservation of the public faith, than to the security of the public tranquility. A distinction may perhaps be imagined, between cases arising upon treaties and the laws of nations, and those which may stand merely on the footing of the municipal law. The former kind may be supposed proper for the federal jurisdiction; the latter for that of the states. But it is at least problematical, whether an unjust sentence against a foreigner, where the subject of controversy was wholly relative to the *lex loci,* would not, if unredressed, be an aggression upon his sovereign, as well as one which violated the stipulations of a treaty, or the general law of nations. And a still greater objection to the distinction would result from the immense difficulty, if not impossibility, of a practical discrimination between the cases of one complexion and those of the other. So great a proportion of the controversies in which foreigners are parties involve

national questions, that it is by far most safe and most expedient, to refer all those in which they are concerned to the national tribunals.

The power of determining causes between two states, between one state and the citizens of another, and between the citizens of different states, is perhaps not less essential to the peace of the union, than that which has been just examined. History gives us a horrid picture of the dissensions and private wars which distracted and desolated Germany, prior to the institution of the Imperial Chamber by Maximilian, towards the close of the fifteenth century; and informs us, at the same time, of the vast influence of that institution, in appeasing the disorders, and establishing the tranquility of the empire. This was a court invested with authority to decide finally all differences among the members of the Germanic body.

A method of terminating territorial disputes between the states, under the authority of the federal head, was not unattended to, even in the imperfect system by which they have been hitherto held together. But there are other sources, besides interfering claims of boundary, from which bickerings and animosities may spring up among the members of the union. To some of these, we have been witnesses in the course of our past experience. It will readily be conjectured, that I allude to the fraudulent laws which have been passed in too many of the states. And though the proposed constitution establishes particular guards against the repetition of those instances, which have heretofore made their appearance; yet it is warrantable to apprehend, that the spirit which produced them will assume new shapes that could not be foreseen, nor specifically provided against. Whatever practices may have a tendency to disturb the harmony of the states, are proper objects of federal superintendence and control.

It may be esteemed the basis of the union, that "the citizens of each state shall be entitled to all the privileges and immunities of citizens of the several states." And if it be a just principle that every government ought to possess the means of executing its own provisions, by its own authority, it will follow, that in order to the inviolable maintenance of that equality of privileges and immunities to which the citizens of the union will be entitled, the national judiciary ought to preside in all cases in which one state or its citizens are opposed to another state or its citizens. To secure the full effect of so fundamental a provision against all evasion and subterfuge, it is necessary that its construction should be committed to that tribunal, which having

no local attachments, will be likely to be impartial between the different states and their citizens, and which, owing its official existence to the union, will never be likely to feel any bias inauspicious to the principles on which it is founded.

The fifth point will demand little animadversion. The most bigoted idolizers of state authority have not thus far shown a disposition to deny the national judiciary the cognizance of maritime causes. These so generally depend on the laws of nations, and so commonly affect the rights of foreigners, that they fall within the considerations which are relative to the public peace. The most important part of them are, by the present confederation, submitted to federal jurisdiction.

The reasonableness of the agency of the national courts, in cases in which the state tribunals cannot be supposed to be impartial, speaks for itself. No man ought certainly to be a judge in his own cause, or in any cause, in respect to which he has the least interest or bias. This principle has no inconsiderable weight in designating the federal courts, as the proper tribunals for the determination of controversies between different states and their citizens. And it ought to have the same operation, in regard to some cases, between citizens of the same state. Claims to land under grants of different states, founded upon adverse pretensions of boundary, are of this description. The courts of neither of the granting states could be expected to be unbiased. The laws may have even prejudiced the question, and tied the courts down to decisions in favor of the grants of the state to which they belonged. And where this had not been done, it would be natural that the judges, as men, should feel a strong predilection to the claims of their own government.

Having thus laid down and discussed the principles which ought to regulate the constitution of the federal judiciary, we will proceed to test, by these principles, the particular powers of which, according to the plan of the convention, it is to be composed. It is to comprehend "all cases in law and equity arising under the constitution, the laws of the United States, and treaties made, or which shall be made, under their authority; to all cases affecting ambassadors, other public ministers, and consuls; to all cases of admiralty and maritime jurisdiction; to controversies to which the United States shall be a party; to controversies between two or more states; between a state and citizens of another state; between citizens of different states; between citizens of the same state, claiming lands under grants of different states; and

between a state or the citizens thereof, and foreign states, citizens, and subjects." This constitutes the entire mass of the judicial authority of the union. Let us now review it in detail. It is then to extend,—

First. To all cases in law and equity arising under the constitution and the laws of the United States. This corresponds with the two first classes of causes, which have been enumerated, as proper for the jurisdiction of the United States. It has been asked, what is meant by "cases arising under the constitution," in contradistinction from those "arising under the laws of the United States?" The difference has been already explained. All the restrictions upon the authority of the state legislatures furnish examples. They are not, for example, to emit paper money; but the interdiction results from the constitution, and will have no connection with any law of the United States. Should paper money, notwithstanding, be emitted, the controversies concerning it would be cases arising under the constitution, and not under laws of the United States, in the ordinary signification of the terms. This may serve as a sample of the whole.

It has also been asked, what need of the word "equity?" What equitable causes can grow out of the constitution and laws of the United States? There is hardly a subject of litigation between individuals, which may not involve those ingredients of fraud, accident, trust, or hardship, which would render the matter an object of equitable, rather than of legal jurisdiction, as the distinction is known and established in several of the states. It is the peculiar province, for instance, of a court of equity, to relieve against what are called hard bargains: these are contracts in which, though there may have been no direct fraud or deceit, sufficient to invalidate them in a court of law; yet there may have been some undue and unconscionable advantage taken of the necessities or misfortunes of one of the parties, which a court of equity would not tolerate. In such cases, where foreigners were concerned on either side, it would be impossible for the federal judicatories to do justice without an equitable as well as a legal jurisdiction. Agreements to convey lands claimed under the grants of different states, may afford another example of the necessity of an equitable jurisdiction in the federal courts. This reasoning may not be so palpable in those states where the formal and technical distinction between law and equity is not maintained, as in this state, where it is exemplified by every day's practice.

The judiciary authority of the union is to extend—

Second. To treaties made, or which shall be made, under the authority of the United States, and to all cases affecting ambassadors, other public ministers and consuls. These belong to the fourth class of the enumerated cases, as they have an evident connection with the preservation of the national peace.

Third. To cases of admiralty and maritime jurisdiction. These form, altogether, the fifth of the enumerated classes of causes, proper for the cognizance of the national courts.

Fourth. To controversies to which the United States shall be a party. These constitute the third of those classes.

Fifth. To controversies between two or more states; between a state and citizens of another state; between citizens of different states. These belong to the fourth of those classes, and partake, in some measure, of the nature of the last.

Sixth. To cases between the citizens of the same state, claiming lands under grants of different states. These fall within the last class, and are the only instances in which the proposed constitution directly contemplates the cognizance of disputes between the citizens of the same state.

Seventh. To cases between a state and the citizens thereof, and foreign states, citizens or subjects. These have been already explained to belong to the fourth of the enumerated classes, and have been shown to be, in a peculiar manner, the proper subjects of the national judicature.

From this review of the particular powers of the federal judiciary, as marked out in the constitution, it appears that they are all conformable to the principles which ought to have governed the structure of that department, and which were necessary to the perfection of the system. If some partial inconveniences should appear to be connected with the incorporation of any of them into the plan, it ought to be recollected, that the national legislature will have ample authority to make such exceptions, and to prescribe such regulations, as will be calculated to obviate or remove these inconveniences. The possibility of particular mischiefs can never be viewed, by a well-informed mind, as a solid objection to a principle which is calculated to avoid general mischiefs, and to obtain general advantages. PUBLIUS.

THE POLICY OF PROTECTION

Report on Manufactures

[Communicated to the House of Representatives, December 5, 1791.]

The Secretary of the Treasury, in obedience to the order of the House of Representatives, of the 15th day of January, 1790, has applied his attention, at as early a period as his other duties would permit, to the subject of Manufactures, and particularly to the means of promoting such as will tend to render the United States independent on foreign nations, for military and other essential supplies; and he thereupon respectfully submits the following report:

The expediency of encouraging manufactures in the United States, which was not long since deemed very questionable, appears at this time to be pretty generally admitted. The embarrassments which have obstructed the progress of our external trade, have led to serious reflections on the necessity of enlarging the sphere of our domestic commerce. The restrictive legislations, which, in foreign markets, abridge the vent of the increasing surplus of our agricultural produce, serve to beget an earnest desire that a more extensive demand for that surplus may be created at home and the complete success which has rewarded manufacturing enterprise, in some valuable branches, conspiring with the promising symptoms which attend some less mature essays in others, justify a hope that the obstacles to the growth of this species of industry are less formidable than they were apprehended to be; and that it is not difficult to find, in its further extension, a full indemnification for any external disadvantages, which are or may be experienced, as well as an accession of resources, favorable to national independence and safety.

There still are, nevertheless, respectable patrons of opinions unfriendly to the encouragement of manufactures. The following are, substantially, the arguments by which these opinions are defended.

"In every country (say those who entertain them) agriculture is the most beneficial and productive object of human industry. This position, generally, if not universally true, applies with peculiar emphasis to the United States, on account of their immense tracts of fertile territory, uninhabited and unimproved. Nothing can afford so advantageous an employment for capital and labor, as the conversion of this extensive wilderness into cultivated farms. Nothing, equally with this,

can contribute to the population, strength, and real riches of the country.

"To endeavor, by the extraordinary patronage of government, to accelerate the growth of manufactures, is, in fact, to endeavor, by force and art, to transfer the natural current of industry from a more to a less beneficial channel. Whatever has such a tendency, must necessarily be unwise; indeed, it can hardly ever be wise in a government to attempt to give a direction to the industry of its citizens. This, under the quick-sighted guidance of private interest, will, if left to itself, infallibly find its own way to the most profitable employment; and it is by such employment that the public prosperity will be most effectually promoted. To leave industry to itself, therefore, is, in almost every case, the soundest as well as the simplest policy.

"This policy is not only recommended to the United States, by considerations which affect all nations; it is, in a manner, dictated to them by the imperious force of a very peculiar situation. The smallness of their population compared with their territory; the constant allurements to emigration from the settled to the unsettled parts of the country: the facility with which the less independent condition of an artisan can be exchanged for the more independent condition of a farmer; these, and similar causes, conspire to produce, and, for a length of time, must continue to occasion, a scarcity of hands for manufacturing occupations, and dearness of labor generally. To these disadvantages for the prosecution of manufactures, a deficiency of pecuniary capital being added, the prospect of a successful competition with the manufactures of Europe, must be regarded as little less than desperate. Extensive manufactures can only be the offspring of a redundant, at least of a full population. Till the latter shall characterize the situation of this country, 'tis vain to hope for the former.

"If, contrary to the natural course of things, an unseasonable and premature spring can be given to certain fabrics, by heavy duties, prohibitions, bounties, or by other forced expedients, this will only be to sacrifice the interests of the community to those of particular classes. Besides the misdirection of labor, a virtual monopoly will be given to the persons employed on such fabrics; and an enhancement of price, the inevitable consequence of every monopoly, must be defrayed at the expense of the other parts of society. It is far preferable that those persons should be engaged in the cultivation of the earth, and that we should procure, in exchange for its productions, the commodities with which foreigners are able to supply us in greater perfection, and upon better terms."

This mode of reasoning is founded upon facts and principles which have certainly respectable pretensions. If it had governed the conduct of nations more generally than it has done, there is room to suppose that it might have carried them faster to prosperity and greatness than they have attained by the pursuit of maxims too widely opposite. Most general theories, however, admit of numerous exceptions, and there are few, if any, of the political kind, which do not blend a considerable portion of error with the truths they inculcate.

In order to an accurate judgment how far that which has been just stated ought to be deemed liable to a similar imputation, it is necessary to advert carefully to the considerations which plead in favor of manufactures, and which appear to recommend the special and positive encouragement of them in certain cases, and under certain reasonable limitations.

It ought readily to be conceded that the cultivation of the earth, as the primary and most certain source of national supply; as the immediate and chief source of subsistence to man; as the principal source of those materials which constitute the nutriment of other kinds of labor; as including a state most favorable to the freedom and independence of the human mind—one, perhaps, most conducive to the multiplication of the human species; has intrinsically a strong claim to pre-eminence over every other kind of industry.

But, that it has a title to anything like an exclusive predilection, in any country, ought to be admitted with great caution; that it is even more productive than every other branch of industry, requires more evidence than has yet been given in support of the position. That its real interests, precious and important as, without the help of exaggeration, they truly are, will be advanced, rather than injured, by the due encouragement of manufactures, may, it is believed, be satisfactorily demonstrated. And it is also believed that the expediency of such encouragement, in a general view, may be shown to be recommended by the most cogent and persuasive motives of national policy.

It has been maintained that agriculture is not only the most productive, but the only productive species of industry. The reality of this suggestion, in either respect, has, however, not been verified by any accurate detail of facts and calculations; and the general arguments which are adduced to prove it, are rather subtle and paradoxical, than solid or convincing.

Those which maintain its exclusive productiveness, are to this effect:

Labor bestowed upon the cultivation of land, produces enough, not only to replace all the necessary expenses incurred in the business, and to maintain the persons who are employed in it, but to afford, together with the ordinary profit on the stock or capital of the farmer, a net surplus or rent for the landlord or proprietor of the soil. But the labor of artificers does nothing more than replace the stock which employs them (or which furnishes materials, tools, and wages), and yield the ordinary profit upon that stock. It yields nothing equivalent

to the rent of land; neither does it add anything to the total value of the whole annual produce of the land and labor of the country. The additional value given to those parts of the produce of land, which are wrought into manufactures, is counterbalanced by the value of those other parts of that produce which are consumed by the manufacturers. It can, therefore, only be by saving or parsimony, not by the positive productiveness of their labor, that the classes of artificers can, in any degree, augment the revenue of the society.

To this it has been answered:

1. "That, inasmuch as it is acknowledged that manufacturing labor re-produces a value equal to that which is expended or consumed in carrying it on, and continues in existence the original stock or capital employed, it ought, on that account alone, to escape being considered as wholly unproductive. That, though it should be admitted, as alleged, that the consumption of the produce of the soil, by the classes of artificers or manufacturers, is exactly equal to the value added by their labor to the materials upon which it is exerted, yet, it would not thence follow, that it added nothing to the revenue of the society, or to the aggregate value of the annual produce of its land and labor. If the consumption for any given period amounted to a given sum, and the increased value of the produce manufactured, in the same period, to a like sum, the total amount of the consumption and production, during that period, would be equal to the two sums, and consequently double the value of the agricultural produce consumed; and, though the increment of value produced by the classes of artificers should at no time exceed the value of the produce of the land consumed by them, yet there would be, at every moment, in consequence of their labor, a greater value of goods in the market than would exist independent of it.

2. "That the position, that artificers can augment the revenue of a society only by parsimony, is true in no other sense than in one which is equally applicable to husbandmen or cultivators. It may be alike affirmed of all these classes, that the fund acquired by their labor, and destined for their support, is not, in an ordinary way, more than equal to it. And hence it will follow that augmentations of the wealth or capital of the community (except in the instances of some extraordinary dexterity or skill), can only proceed, with respect to any of them, from the savings of the more thrifty and parsimonious.

3. "That the annual produce of the land and labor of a country can only be increased in two ways—by some improvement in the productive powers of the useful labor which actually exist within it, or by some increase in the quantity of such labor. That, with regard to the first, the labor of artificers being capable of greater subdivision and simplicity of operation than that of cultivators, it is susceptible, in a proportionately greater degree of improvement in its productive powers, whether to be derived from an accession of skill or from the application of ingenious machinery: in which particular, therefore, the labor employed in the culture of land can pretend to no advantage over that engaged in manufactures. That, with regard to an augmentation of the quantity of useful labor, this, excluding adventitious circumstances,

must depend essentially upon an increase of capital, which again must depend upon the savings made out of the revenues of those who furnish or manage that which is at any time employed, whether in agriculture or in manufactures, or in any other way."

But, while the exclusive productiveness of agricultural labor has been thus denied and refuted, the superiority of its productiveness has been conceded without hesitation. As this concession involves a point of considerable magnitude, in relation to maxims of public administration, the grounds on which it rests are worthy of a distinct and particular examination.

One of the arguments made use of in support of the idea, may be pronounced both quaint and superficial. It amounts to this: That, in the productions of the soil, nature co-operates with man; and that the effect of their joint labor must be greater than that of the labor of man alone.

This, however, is far from being a necessary inference. It is very conceivable that the labor of man alone, laid out upon a work requiring great skill and art to bring it to perfection, may be more productive, in value, than the labor of nature and man combined, when directed towards more simple operations and objects; and when it is recollected to what an extent the agency of nature, in the application of the mechanical powers, is made auxiliary to the prosecution of manufactures, the suggestion which has been noticed loses even the appearance of plausibility.

It might also be observed, with a contrary view, that the labor employed in agriculture is, in a great measure, periodical and occasional, depending on seasons, and liable to various and long intermissions; while that occupied in many manufactures is constant and regular, extending through the year, embracing, in some instances, night as well as day. It is also probable that there are, among the cultivators of the land, more examples of remissness than among artificers. The farmer, from the peculiar fertility of his land, or some other favorable circumstance, may frequently obtain a livelihood, even with a considerable degree of carelessness in the mode of cultivation; but the artisan can with difficulty effect the same object, without exerting himself pretty equally with all those who are engaged in the same pursuit. And if it may likewise be assumed as a fact, that manufactures open a wider field to exertions of ingenuity than agriculture, it would not be a strained conjecture, that the labor employed in the former, being at once more

constant, more uniform, and more ingenious, than that which is employed in the latter, will be found, at the same time, more productive.

But it is not meant to lay stress on observations of this nature; they ought only to serve as a counterbalance to those of a similar complexion. Circumstances so vague and general, as well as so abstract, can afford little instruction in a matter of this kind.

Another, and that which seems to be the principal argument offered for the superior productiveness of agricultural labor, turns upon the allegation, that labor employed on manufactures, yields nothing equivalent to the rent of land; or to that net surplus, as it is called, which accrues to the proprietor of the soil.

But this distinction, important as it has been deemed, appears rather verbal than substantial.

It is easily discernible, that what, in the first instance, is divided into two parts, under the denominations of the ordinary profit of the stock of the farmer and rent to the landlord, is, in the second instance, united under the general appellation of the ordinary profit on the stock of the undertaker; and that this formal or verbal distribution constitutes the whole difference in the two cases. It seems to have been overlooked, that the land is itself a stock or capital, advanced or lent by its owner to the occupier or tenant, and that the rent he receives is only the ordinary profit of a certain stock in land, not managed by the proprietor himself, but by another, to whom he lends or lets it, and who, on his part, advances a second capital, to stock and improve the land, upon which he also receives the usual profit. The rent of the landlord and the profit of the farmer are, therefore, nothing more than the ordinary profits of two capitals belonging to two different persons, and united in the cultivation of a farm; as, in the other case, the surplus which arises upon any manufactory, after replacing the expenses of carrying it on, answers to the ordinary profits of one or more capitals engaged in the prosecution of such manufactory. It is said one or more capitals, because, in fact, the same thing which is contemplated in the case of the farm, sometimes happens in that of a manufactory. There is one, who furnishes a part of the capital or lends a part of the money by which it is carried on, and another, who carries it on with the addition of his own capital. Out of the surplus which remains after defraying expenses, an interest is paid to the money-lender, for the portion of the capital furnished by him, which exactly agrees with the rent

paid to the landlord; and the residue of that surplus constitutes the profit of the undertaker or manufacturer, and agrees with what is denominated the ordinary profits of two capitals employed in a manufactory; as, in the other case, the rent of the landlord and the revenue of the farmer compose the ordinary profits of two capitals employed in the cultivation of a farm.

The rent, therefore, accruing to the proprietor of the land, far from being a criterion of exclusive productiveness, as has been argued, is no criterion even of superior productiveness. The question must still be, whether the surplus, after defraying expenses of a given capital, employed in the purchase and improvement of a piece of land, is greater or less than that of a like capital, employed in the prosecution of a manufactory; or whether the whole value produced from a given capital and a given quantity of labor, employed in one way, be greater or less than the whole value produced from an equal capital and an equal quantity of labor, employed in the other way; or rather, perhaps, whether the business of agriculture, or that of manufactures, will yield the greatest product, according to a compound ratio of the quantity of the capital, and the quantity of labor, which are employed in the one or in the other.

The solution of either of these questions is not easy; it involves numerous and complicated details, depending on an accurate knowledge of the objects to be compared. It is not known that the comparison has ever yet been made upon sufficient data, properly ascertained and analyzed. To be able to make it on the present occasion, with satisfactory precision, would demand more previous inquiry and investigation, than there has been hitherto either leisure or opportunity to accomplish.

Some essays, however, have been made towards acquiring the requisite information; which have rather served to throw doubt upon, than to confirm the hypothesis under examination. But it ought to be acknowledged, that they have been too little diversified, and are too imperfect to authorize a definitive conclusion either way; leading rather to probable conjecture than to certain deduction. They render it probable that there are various branches of manufactures, in which a given capital will yield a greater total product, and a considerably greater net product, than an equal capital invested in the purchase and improvement of lands; and that there are also some branches, in which both the gross and the net produce will exceed that of agricultural

industry, according to a compound ratio of capital and labor. But it is on this last point that there appears to be the greatest room for doubt. It is far less difficult to infer generally, that the net produce of capital engaged in manufacturing enterprises is greater than that of capital engaged in agriculture.

The foregoing suggestions are not designed to inculcate an opinion that manufacturing industry is more productive than that of agriculture. They are intended rather to show that the reverse of this proposition is not ascertained; that the general arguments, which are brought to establish it, are not satisfactory; and consequently, that a supposition of the superior productiveness of tillage ought to be no obstacle to listening to any substantial inducements to the encouragement of manufactures, which may be otherwise perceived to exist, through an apprehension that they may have a tendency to divert labor from a more to a less profitable employment.

It is extremely probable, that, on a full and accurate development of the matter, on the ground of fact and calculation, it would be discovered that there is no material difference between the aggregate productiveness of the one, and of the other kind of industry; and that the propriety of the encouragements, which may, in any case, be proposed to be given to either, ought to be determined upon consideration irrelative to any comparison of that nature.

II. But without contending for the superior productiveness of manufacturing industry, it may conduce to a better judgment of the policy which ought to be pursued respecting its encouragement, to contemplate the subject under some additional aspects, tending not only to confirm the idea that this kind of industry has been improperly represented as unproductive in itself, but to evince, in addition, that the establishment and diffusion of manufactures have the effect of rendering the total mass of useful and productive labor, in a community, greater than it would otherwise be. In prosecuting this discussion, it may be necessary briefly to resume and review some of the topics which have been already touched.

To affirm that the labor of the manufacturer is unproductive, because he consumes as much of the produce of land as he adds value to the raw material which he manufactures, is not better founded, than it would be to affirm that the labor of the farmer, which furnishes materials to the manufacturer, is unproductive, because he consumes an

equal value of manufactured articles. Each furnishes a certain portion of the produce of his labor to the other, and each destroys a correspondent portion of the produce of the labor of the other. In the mean time, the maintenance of two citizens, instead of one, is going on; the State has two members instead of one; and they, together, consume twice the value of what is produced from the land.

If, instead of a farmer and artificer, there were a farmer only, he would be under the necessity of devoting a part of his labor to the fabrication of clothing, and other articles, which he would procure of the artificer, in the case of there being such a person; and of course he would be able to devote less labor to the cultivation of his farm, and would draw from it a proportionately less product. The whole quantity of production, in this state of things, in provisions, raw materials, and manufactures, would certainty not exceed in value the amount of what would be produced in provisions and raw materials only, if there were an artificer as well as a farmer.

Again, if there were both an artificer and a farmer, the latter would be left at liberty to pursue exclusively the cultivation of his farm. A greater quantity of provisions and raw materials would, of course, be produced, equal, at least, as has been already observed, to the whole amount of the provisions, raw materials, and manufactures, which would exist on a contrary supposition. The artificer, at the same time, would be going on in the production of manufactured commodities, to an amount sufficient, not only to repay the farmer, in those commodities, for the provisions and materials which were procured from him, but to furnish the artificer himself, with a supply of similar commodities for his own use. Thus, then, there would be two quantities or values in existence, instead of one; and the revenue and consumption would be double, in one case, what it would be in the other.

If, in place of both of these suppositions, there were supposed to be two farmers and no artificer, each of whom applied a part of his labor to the culture of land, and another part to the fabrication of manufactures; in this case, the portion of the labor of both, bestowed upon land, would produce the same quantity of provisions and raw materials only, as would be produced by the entire sum the labor of one, applied in the same manner; and the portion of the labor of both, bestowed upon manufactures, would produce the same quantity of manufactures only, as would be produced by the entire sum of the labor of one, applied in

the same manner. Hence, the produce of the labor of the two farmers would not be greater than the produce of the labor of the farmer and artificer; and hence it results, that the labor of the artificer is as positively productive as that of the farmer, and as positively augments the revenue of the society.

The labor of the artificer replaces to the farmer that portion of his labor with which he provides the materials of exchange with the artificer, and which he would otherwise have been compelled to apply to manufactures; and while the artificer thus enables the farmer to enlarge his stock of agricultural industry, a portion of which he purchases for his own use, he also supplies himself with the manufactured articles, of which he stands in need. He does still more. Besides this equivalent, which he gives for the portion of agricultural labor consumed by him, and this supply of manufactured commodities for his own consumption, he furnishes still a surplus, which compensates for the use of the capital advanced, either by himself or some other person, for carrying on the business. This is the ordinary profit of the stock employed in the manufactory, and is, in every sense, as effective an addition to the income of the society as the rent of land.

The produce of the labor of the artificer, consequently, may be regarded as composed of three parts; one, by which the provisions for his subsistence and the materials for his work, are purchased of the farmer; one, by which he supplies himself with manufactured necessaries; and a third, which constitutes the profit on the stock employed. The two last portions seem to have been overlooked, in the system which represents manufacturing industry as barren and unproductive.

In the course of the preceding illustrations, the products of equal quantities of the labor of the farmer and artificer have been treated as if equal to each other. But this is not to be understood as intending to assert any such precise equality. It is merely a manner of expression, adopted for the sake of simplicity and perspicuity. Whether the value of the produce of the labor of the farmer be somewhat more or less than that of the artificer, is not material to the main scope of the argument, which, hitherto, has only aimed at showing, that the one, as well as the other, occasions a positive augmentation of the total produce and revenue of the society.

It is now proper to proceed a step further, and to enumerate the principal circumstances from which it may be inferred that manufac-

turing establishments not only occasion a positive augmentation of the produce and revenue of the society, but that they contribute essentially to rendering them greater than they could possibly be, without such establishments. The circumstances are:

1. The division of labor.

2. An extension of the use of machinery.

3. Additional employment to classes of the community not ordinarily engaged in the business.

4. The promoting of emigration from foreign countries.

5. The furnishing greater scope for the diversity of talents and dispositions, which discriminate men from each other.

6. The affording a more ample and various field for enterprise.

7. The creating, in some instances, a new, and securing, in all, a more certain and steady demand for the surplus produce of the soil.

Each of these circumstances has a considerable influence upon the total mass of industrious effort in a community; together, they add to it a degree of energy and effect, which are not easily conceived. Some comments upon each of them, in the order in which they have been stated, may serve to explain their importance.

1. *As to the division of labor.*

It has justly been observed, that there is scarcely any thing of greater moment in the economy of a nation, than the proper division of labor. The separation of occupations, causes each to be carried to a much greater perfection, than it could possibly acquire if they were blended. This arises principally from three circumstances:

1st. The greater skill and dexterity naturally resulting from a constant and undivided application to a single object. It is evident that these properties must increase in proportion to the separation and simplification of objects, and the steadiness of the attention devoted to each; and must be less in proportion to the complication of objects, and the number among which the attention is distracted.

2d. The economy of time, by avoiding the loss of it, incident to a frequent transition from one operation to another of a different nature. This depends on various circumstances; the transition itself, the orderly disposition of the implements, machines, and materials, employed in the operation to be relinquished, the preparatory steps to the commencement of a new one, the interruption of the impulse, which the mind of the workman acquires, from being engaged in a particular operation,

the distractions, hesitations, and reluctances, which attend the passage from one kind of business to another.

3d. An extension of the use of machinery. A man occupied on a single object will have it more in his power, and will be more naturally led to exert his imagination, in devising methods to facilitate and abridge labor, than if he were perplexed by a variety of independent and dissimilar operations. Besides this, the fabrication of machines, in numerous instances, becoming itself a distinct trade, the artist who follows it has all the advantages which have been enumerated, for improvement in his particular art; and, in both ways, the invention and application of machinery are extended.

And from these causes united, the mere separation of the occupation of the cultivator from that of the artificer, has the effect of augmenting the productive powers of labor, and with them, the total mass of the produce or revenue of a country. In this single view of the subject, therefore, the utility of artificers or manufacturers, towards promoting an increase of productive industry, is apparent.

2. *As to an extension of the use of machinery, a point which, though partly anticipated, requires to be placed in one or two additional lights.*

The employment of machinery forms an item of great importance in the general mass of national industry. It is an artificial force brought in aid of the natural force of man; and, to all the purposes of labor, is an increase of hands, an accession of strength, unencumbered too by the expense of maintaining the laborer. May it not, therefore, be fairly inferred, that those occupations which give greatest scope to the use of this auxiliary, contribute most to the general stock of industrious effort, and, in consequence, to the general product of industry?

It shall be taken for granted, and the truth of the position referred to observation, that manufacturing pursuits are susceptible, in a greater degree, of the application of machinery, than those of agriculture. If so, all the difference is lost to a community, which, instead of manufacturing for itself, procures the fabrics requisite to its supply, from other countries. The substitution of foreign for domestic manufactures, is a transfer to foreign nations, of the advantages accruing from the employment of machinery, in the modes in which it is capable of being employed, with most utility and to the greatest extent.

The cotton-mill, invented in England, within the last twenty years, is a signal illustration of the general proposition which has been just

advanced. In consequence of it, all the different processes for spinning cotton, are performed by means of machines, which are put in motion by water, and attended chiefly by women and children; and by a smaller number of persons, in the whole, than are requisite in the ordinary mode of spinning. And it is an advantage of great moment, that the operations of this mill continue with convenience, during the night as well as through the day. The prodigious effect of such a machine is easily conceived. To this invention is to be attributed, essentially, the immense progress which has been so suddenly made in Great Britain, in the various fabrics of cotton.

3. *As to the additional employment of classes of the community not originally engaged in the particular business.*

This is not among the least valuable of the means, by which manufacturing institutions contribute to augment the general stock of industry and production. In places where those institutions prevail, besides the persons regularly engaged in them, they afford occasional and extra employment to industrious individuals and families, who are willing to devote the leisure resulting from the intermissions of their ordinary pursuits to collateral labors, as a resource for multiplying their acquisitions or their enjoyments. The husbandman himself experiences a new source of profit and support, from the increased industry of his wife and daughters, invited and stimulated by the demands of the neighboring manufactories.

Besides this advantage of occasional employment to classes having different occupations, there is another, of a nature allied to it, and of a similar tendency. This is the employment of persons who would otherwise be idle, and in many cases, a burthen on the community, either from the bias of temper, habit, infirmity of body, or some other cause, indisposing or disqualifying them for the toils of the country. It is worthy of particular remark, that, in general, women and children are rendered more useful, and the latter more early useful, by manufacturing establishments, than they would otherwise be. Of the number of persons employed in the cotton manufactories of Great Britain, it is computed that four-sevenths, nearly, are women and children; of whom the greatest proportion are children, and many of them of a tender age.

And thus it appears to be one of the attributes of manufactures, and one of no small consequence, to give occasion to the exertion of a greater quantity of industry, even by the same number of persons, where

they happen to prevail, than would exist if there were no such establishments.

4. *As to the promoting of emigration from foreign countries.*

Men reluctantly quit one course of occupation and livelihood for another, unless invited to it by every apparent and proximate advantages. Many who would go from one country to another, if they had a prospect of continuing with more benefit the callings to which they have been educated, will often not be tempted to change their situation by the hope of doing better in some other way. Manufacturers, who, listening to the powerful invitations of a better price for their fabrics, or their labor, of greater cheapness of provisions and raw materials, of an exemption from the chief part of the taxes, burthens, and restraints, which they endure in the old world, of greater personal independence and consequence, under the operation of a more equal government, and of what is far more precious than mere religious toleration, a perfect equality of religious privileges, would probably flock from Europe to the United States, to pursue their own trades or professions, if they were once made sensible of the advantages they would enjoy, and were inspired with an assurance of encouragement and employment, will, with difficulty, be induced to transplant themselves, with a view to becoming cultivators of land.

If it be true, then, that it is the interest of the United States to open every possible avenue to emigration from abroad, it affords a weighty argument for the encouragement of manufactures; which, for the reasons just assigned, will have the strongest tendency to multiply the inducements to it.

Here is perceived an important resource, not only for extending the population, and with it the useful and productive labor of the country, but likewise for the prosecution of manufactures, without deducting from the number of hands, which might otherwise be drawn to tillage; and even for the indemnification of agriculture, for such as might happen to be diverted from it. Many, whom manufacturing views would induce to emigrate, would, afterwards, yield to the temptations which the particular situation of this country holds out to agricultural pursuits. And while agriculture would, in other respects, derive many signal and unmingled advantages from the growth of manufactures, it is a problem whether it would gain or lose, as to the article of the number of persons employed in carrying it on.

5. *As to the furnishing greater scope for the diversity of talents and dispositions, which discriminate men from each other.*

This is a much more powerful mean of augmenting the fund of national industry, than may at first sight appear. It is a just observation, that minds of the strongest and most active powers for their proper objects, fall below mediocrity, and labor without effect, if confined to uncongenial pursuits. And it is thence to be inferred, that the results of human exertion may be immensely increased by diversifying its objects. When all the different kinds of industry obtain in a community, each individual can find his proper element, and can call into activity the whole vigor of his nature. And the community is benefited by the services of its respective members, in the manner in which each can serve it with most effect.

If there be any thing in a remark often to be met with, namely, that there is, in the genius of the people of this country, a peculiar aptitude for mechanical improvements, it would operate as a forcible reason for giving opportunities to the exercise of that species of talent, by the propagation of manufactures.

6. *As to the affording a more ample and various field for enterprise.*

This also is of greater consequence in the general scale of national exertion, than might, perhaps, on a superficial view be supposed, and has effects not altogether dissimilar from those of the circumstance last noticed. To cherish and stimulate the activity of the human mind, by multiplying the objects of enterprise, is not among the least considerable of the expedients by which the wealth of a nation may be promoted. Even things in themselves not positively advantageous, sometimes become so, by their tendency to provoke exertion. Every new scene which is opened to the busy nature of man to rouse and exert itself, is the addition of a new energy to the general stock of effort.

The spirit of enterprise, useful and prolific as it is, must necessarily be contracted or expanded, in proportion to the simplicity or variety of the occupations and productions which are to be found in a society. It must be less in a nation of mere cultivators, than in a nation of cultivators and merchants; less in a nation of cultivators and merchants, than in a nation of cultivators, artificers, and merchants.

7. *As to the creating, in some instances, a new, and securing in all, a more certain and steady demand, for the surplus produce of the soil.*

This is among the most important of the circumstances which have been indicated. It is a principal mean by which the establishment of

manufactures contributes to an augmentation of the produce or revenue of a country, and has an immediate and direct relation to the prosperity of agriculture.

It is evident, that the exertions of the husbandman will be steady or fluctuating, vigorous or feeble, in proportion to the steadiness or fluctuation, adequateness or inadequateness of the markets on which he must depend for the vent of the surplus which may be produced by his labor; and that such surplus, in the ordinary course of things, will be greater or less in the same proportion.

For the purpose of this vent, a domestic market is greatly to be preferred to a foreign one; because it is, in the nature of things, far more to be relied upon.

It is a primary object of the policy of nations, to be able to supply themselves with subsistence from their own soils; and manufacturing nations, as far as circumstances permit, endeavor to procure from the same source, the raw materials necessary for their own fabrics. This disposition, urged by the spirit of monopoly, is sometimes even carried to an injudicious extreme. It seems not always to be recollected, that nations, who have neither mines nor manufactures, can only obtain the manufactured articles of which they stand in need, by an exchange of the products of their soils; and that, if those who can best furnish them with such articles, are unwilling to give a due course to this exchange, they must, of necessity, make every possible effort to manufacture for themselves; the effect of which is, that the manufacturing nations abridge the natural advantages of their situation, through an unwillingness to permit the agricultural countries to enjoy the advantages of theirs, and sacrifice the interests of a mutually beneficial intercourse to the vain project of selling every thing and buying nothing.

But it is also a consequence of the policy which has been noted, that the foreign demand for the products of agricultural countries is, in a great degree, rather casual and occasional, than certain or constant. To what extent injurious interruptions of the demand for some of the staple commodities of the United States may have been experienced from that cause, must be referred to the judgment of those who are engaged in carrying on the commerce of the country; but, it may be safely affirmed, that such interruptions are, at times, very inconveniently felt, and that cases not unfrequently occur, in which markets are so confined and restricted, as to render the demand very unequal to the supply.

Independently, likewise, of the artificial impediments which are created by the policy in question, there are natural causes tending to render the external demand for the surplus of agricultural nations a precarious reliance. The differences of seasons in the countries which are the consumers, make immense differences in the produce of their own soils, in different years; and consequently in the degrees of their necessity for foreign supply. Plentiful harvests with them, especially if similar ones occur at the same time in the countries which are the furnishers, occasion, of course, a glut in the markets of the latter.

Considering how fast, and how much the progress of new settlements, in the United States, must increase the surplus produce of the soil, and weighing seriously the tendency of the system which prevails among most of the commercial nations of Europe; whatever dependence may be placed on the force of natural circumstances to counteract the effects of an artificial policy, there appear strong reasons to regard the foreign demand for that surplus, as too uncertain a reliance, and to desire a substitute for it in an extensive domestic market.

To secure such a market there is no other expedient than to promote manufacturing establishments. Manufacturers, who constitute the most numerous class, after the cultivators of land, are for that reason the principal consumers of the surplus of their labor.

This idea of an extensive domestic market for the surplus produce of the soil, is of the first consequence. It is, of all things, that which most effectually conduces to a flourishing state of agriculture. If the effect of manufactories should be to detach a portion of the hands which would otherwise be engaged in tillage, it might possibly cause a smaller quantity of lands to be under cultivation; but, by their tendency to procure a more certain demand for the surplus produce of the soil, they would, at the same time, cause the lands which were in cultivation to be better improved and more productive. And while, by their influence, the condition of each individual farmer would be meliorated, the total mass of agricultural production would probably be increased. For this must evidently depend as much upon the degree of improvement, if not more, than upon the number of acres under culture.

It merits particular observation, that the multiplication of manufactories not only furnishes a market for those articles which have been accustomed to be produced in abundance in a country; but it likewise creates a demand for such as were either unknown, or produced in inconsiderable quantities. The bowels, as well as the surface of the earth,

are ransacked for articles which were before neglected. Animals, plants, and minerals, acquire an utility and value which were before unexplored.

The foregoing considerations seem sufficient to establish, as general propositions, that it is the interest of nations to diversify the industrious pursuits of the individuals who compose them. That the establishment of manufactures is calculated not only to increase the general stock of useful and productive labor, but even to improve the state of agriculture in particular; certainly to advance the interests of those who are engaged in it. There are other views that will be hereafter taken of the subject, which it is conceived will serve to confirm these inferences.

III. Previously to a further discussion of the objections to the encouragement of manufactures, which have been stated, it will be of use to see what can be said in reference to the particular situation of the United States, against the conclusions appearing to result from what has been already offered.

It may be observed, and the idea is of no inconsiderable weight, that, however true it might be, that a State which, possessing large tracts of vacant and fertile territory, was, at the same time, secluded from foreign commerce, would find its interest and the interest of agriculture, in diverting a part of its population from tillage to manufactures; yet it will not follow, that the same is true of a State which, having such vacant and fertile territory, has, at the same time, ample opportunity of procuring from abroad, on good terms, all the fabrics of which it stands in need, for the supply of its inhabitants. The power of doing this, at least secures the great advantage of a division of labor, leaving the farmer free to pursue, exclusively, the culture of his land, and enabling him to procure with its products the manufactured supplies requisite either to his wants or to his enjoyments. And though it should be true that, in settled countries, the diversification of industry is conducive to an increase in the productive powers of labor, and to an augmentation of revenue and capital; yet it is scarcely conceivable that there can be any thing of so solid and permanent advantage to an uncultivated and unpeopled country, as to convert its wastes into cultivated and inhabited districts. If the revenue, in the meantime, should be less, the capital, in the event, must be greater.

To these observations, the following appears to be a satisfactory answer:

1st. If the system of perfect liberty to industry and commerce were the prevailing system of nations, the arguments which dissuade a country, in the predicament of the United States, from the zealous pursuit of manufactures, would doubtless have great force. It will not be affirmed that they might not be permitted, with few exceptions, to serve as a rule of national conduct. In such a state of things, each country would have the full benefit of its peculiar advantages to compensate for its deficiencies or disadvantages. If one nation were in a condition to supply manufactured articles, on better terms than another, that other might find an abundant indemnification in a superior capacity to furnish the produce of the soil. And a free exchange, mutually beneficial, of the commodities which each was able to supply, on the best terms, might be carried on between them, supporting, in full vigor, the industry of each. And though the circumstances which have been mentioned, and others which will be unfolded hereafter, render it probable that nations, merely agricultural, would not enjoy the same degree of opulence, in proportion to their numbers, as those which united manufactures with agriculture; yet the progressive improvement of the lands of the former might, in the end, atone for an inferior degree of opulence in the mean time; and in a case in which opposite considerations are pretty equally balanced, the option ought, perhaps, always to be in favor of leaving industry to its own direction.

But the system which has been mentioned, is far from characterizing the general policy of nations. The prevalent one has been regulated by an opposite spirit. The consequence of it is, that the United States are, to a certain extent, in the situation of a country precluded from foreign commerce. They can, indeed, without difficulty, obtain from abroad the manufactured supplies of which they are in want; but they experience numerous and very injurious impediments to the emission and vent of their own commodities. Nor is this the case in reference to a single foreign nation only. The regulations of several countries, with which we have the most extensive intercourse, throw serious obstructions in the way of the principal staples of the United States.

In such a position of things, the United States cannot exchange with Europe on equal terms; and the want of reciprocity would render them the victim of a system which should induce them to confine their views to agriculture, and refrain from manufactures. A constant and increasing necessity, on their part, for the commodities of Europe, and only a partial and occasional demand for their own, in return,

could not but expose them to a state of impoverishment, compared with the opulence to which their political and natural advantages authorize them to aspire.

Remarks of this kind are not made in the spirit of complaint. It is for the nations whose regulations are alluded to, to judge for themselves, whether, by aiming at too much, they do not lose more than they gain. It is for the United States to consider by what means they can render themselves least dependent on the combinations, right or wrong, of foreign policy.

It is no small consolation, that, already, the measures which have embarrassed our trade, have accelerated internal improvements, which, upon the whole, have bettered our affairs. To diversify and extend these improvements is the surest and safest method of indemnifying ourselves for any inconveniences which those or similar measures have a tendency to beget. If Europe will not take from us the products of our soil, upon terms consistent with our interest, the natural remedy is to contract, as fast as possible, our wants of her.

2d. The conversion of their waste into cultivated lands, is certainly a point of great moment, in the political calculations of the United States. But the degree in which this may possibly be retarded, by the encouragement of manufactories, does not appear to countervail the powerful inducements to afford that encouragement.

An observation made in another place, is of a nature to have great influence upon this question. If it cannot be denied, that the interests, even of agriculture, may be advanced more by having such of the lands of a State as are occupied, under good cultivation, than by having a greater quantity occupied under a much inferior cultivation; and if manufactories, for the reasons assigned, must be admitted to have a tendency to promote a more steady and vigorous cultivation of the lands occupied, than would happen without them, it will follow that they are capable of indemnifying a country for a diminution of the progress of new settlements; and may serve to increase both the capital value, and the income of its lands, even though they should abridge the number of acres under tillage.

But it does by no means follow, that the progress of new settlements would be retarded by the extension of manufactures. The desire of being an independent proprietor of land, is founded on such strong principles in the human breast, that, where the opportunity of becoming so is as great as it is in the United States, the proportion will be small

of those whose situations would otherwise lead to it, who would be diverted from it towards manufactures. And it is highly probable, as already intimated, that the accessions of foreigners, who, originally drawn over by manufacturing views, would afterwards abandon them for agricultural, would be more than an equivalent for those of our own citizens who might happen to be detached from them.

The remaining objections to a particular encouragement of manufactures in the United States, now require to be examined.

One of these turns on the proposition, that industry, if left to itself, will naturally find its way to the most useful and profitable employment. Whence it is inferred, that manufactures, without the aid of government, will grow up as soon and as fast as the natural state of things and the interest of the community may require.

Against the solidity of this hypothesis, in the full latitude of the terms, very cogent reasons may be offered. These have relation to the strong influence of habit and the spirit of imitation; the fear of want of success in untried enterprises; the intrinsic difficulties incident to first essays towards a competition with those who have previously attained to perfection in the business to be attempted; the bounties, premiums, and other artificial encouragements, with which foreign nations second the exertions of their own citizens, in the branches in which they are to be rivalled.

Experience teaches, that men are often so much governed by what they are accustomed to see and practise, that the simplest and most obvious improvements, in the most ordinary occupations, are adopted with hesitation, reluctance, and by slow gradations. The spontaneous transition to new pursuits, in a community long habituated to different ones, may be expected to be attended with proportionably greater difficulty. When former occupations ceased to yield a profit adequate to the subsistence of their followers; or when there was an absolute deficiency of employment in them, owing to the superabundance of hands, changes would ensue; but these changes would be likely to be more tardy than might consist with the interest either of individuals or of the society. In many cases they would not happen, while a bare support could be insured by an adherence to ancient courses, though a resort to a more profitable employment might be practicable. To produce the desirable changes as early as may be expedient, may therefore require the incitement and patronage of government.

The apprehension of failing in new attempts, is, perhaps, a more

serious impediment. There are dispositions apt to be attracted by the mere novelty of an undertaking; but these are not always those best calculated to give it success. To this it is of importance that the confidence of cautious, sagacious capitalists, both citizens and foreigners, should be excited. And to inspire this description of persons with confidence, it is essential that they should be made to see in any project which is new—and for that reason alone, if for no other, precarious—the prospect of such a degree of countenance and support from government, as may be capable of overcoming the obstacles inseparable from first experiments.

The superiority antecedently enjoyed by nations who have preoccupied and perfected a branch of industry, constitutes a more formidable obstacle than either of those which have been mentioned, to the introduction of the same branch into a country in which it did not before exist. To maintain, between the recent establishments of one country, and the long matured establishments of another country, a competition upon equal terms, both as to quality and price, is, in most cases, impracticable. The disparity, in the one, or in the other, or in both, must necessarily be so considerable, as to forbid a successful rivalship, without the extraordinary aid and protection of government.

But the greatest obstacle of all to the successful prosecution of a new branch of industry in a country in which it was before unknown, consists, as far as the instances apply, in the bounties, premiums, and other aids, which are granted in a variety of cases, by the nations in which the establishments to be imitated are previously introduced. It is well known (and particular examples, in the course of this report, will be cited) that certain nations grant bounties on the exportation of particular commodities, to enable their own workmen to undersell and supplant all competitors in the countries to which those commodities are sent. Hence the undertakers of a new manufacture have to contend, not only with the natural disadvantages of a new undertaking, but with the gratuities and remunerations which other governments bestow. To be enabled to contend with success, it is evident that the interference and aid of their own governments are indispensable.

Combinations by those engaged in a particular branch of business, in one country, to frustrate the first efforts to introduce it into another, by temporary sacrifices, recompensed, perhaps, by extraordinary indemnifications of the government of such country, are believed to have existed, and are not to be regarded as destitute of probability. The

existence of assurance of aid from the government of the country in which the business is to be introduced, may be essential to fortify adventurers against the dread of such combinations; to defeat their effects, if formed; and to prevent their being formed, by demonstrating that they must in the end prove fruitless.

Whatever room there may be for an expectation, that the industry of a people, under the direction of private interest, will, upon equal terms, find out the most beneficial employment for itself, there is none for a reliance, that it will struggle against the force of unequal terms, or will, of itself, surmount all the adventitious barriers to a successful competition, which may have been erected, either by the advantages naturally acquired from practice, and previous possession of the ground, or by those which may have sprung from positive regulations and an artificial policy. This general reflection might alone suffice as an answer to the objection under examination, exclusively of the weighty considerations which have been particularly urged.

The objections to the pursuit of manufactures in the United States, which next present themselves to discussion, represent an impracticability of success, arising from three causes: scarcity of hands, dearness of labor, want of capital.

The two first circumstances are, to a certain extent, real; and, within due limits, ought to be admitted as obstacles to the success of manufacturing enterprise in the United States. But there are various considerations which lessen their force, and tend to afford an assurance, that they are not sufficient to prevent the advantageous prosecution of many very useful and extensive manufactories.

With regard to scarcity of hands, the fact itself must be applied with no small qualification to certain parts of the United States. There are large districts which may be considered as pretty fully peopled; and which, notwithstanding a continual drain for distant settlement, are thickly interspersed with flourishing and increasing towns. If these districts have not already reached the point at which the complaint of scarcity of hands ceases, they are not remote from it, and are approaching fast towards it; and having, perhaps, fewer attractions to agriculture than some other parts of the Union, they exhibit a proportionably stronger tendency towards other kinds of industry. In these districts may be discerned no inconsiderable maturity for manufacturing establishments.

But there are circumstances, which have been already noticed, with

another view, that materially diminish, every where, the effect of a scarcity of hands. These circumstances are, the great use which can be made of women and children, on which point a very pregnant and instructive fact has been mentioned—the vast extension given by late improvements to the employment of machines—which, substituting the agency of fire and water, has prodigiously lessened the necessity for manual labor; the employment of persons ordinarily engaged in other occupations, during the seasons or hours of leisure, which, besides giving occasion to the exertion of a greater quantity of labor, by the same number of persons, and thereby increasing the general stock of labor, as has been elsewhere remarked, may also be taken into the calculation, as a resource for obviating the scarcity of hands; lastly, the attraction of foreign emigrants. Whoever inspects, with a careful eye, the composition of our towns, will be made sensible to what an extent this resource may be relied upon. This exhibits a large proportion of ingenious and valuable workmen, in different arts and trades, who, by expatriating from Europe, have improved their own condition, and added to the industry and wealth of the United States. It is a natural inference, from the experience we have already had, that, as soon as the United States shall present the countenance of a serious prosecution of manufactures; as soon as foreign artists shall be made sensible that the state of things affords a moral certainty of employment and encouragement; competent numbers of European workmen will transplant themselves, effectually to insure the success of the design. How, indeed, can it otherwise happen, considering the various and powerful inducements which the situation of this country offers—addressing themselves to so many strong passions and feelings, to so many general and particular interests.

It may be affirmed, therefore, in respect to hands for carrying on manufactures, that we shall, in a great measure, trade upon a foreign stock, reserving our own for the cultivation of our lands and the manning of our ships, as far as character and circumstances shall incline. It is not unworthy of remark, that the objection to the success of manufactures, deduced from the scarcity of hands, is alike applicable to trade and navigation, and yet these are perceived to flourish, without any sensible impediment from that cause.

As to the dearness of labor (another of the obstacles alleged), this has relation principally to two circumstances: one, that which has been

just discussed, or the scarcity of hands; the other, the greatness of profits.

As far as it is a consequence of the scarcity of hands, it is mitigated by all the considerations which have been adduced as lessening that deficiency. It is certain, too, that the disparity in this respect, between some of the most manufacturing parts of Europe, and a large proportion of the United States, is not nearly so great as is commonly imagined. It is also much less in regard to artificers and manufacturers, than in regard to country laborers; and while a careful comparison shows that there is, in this particular, much exaggeration; it is also evident, that the effect of the degree of disparity, which does truly exist, is diminished in proportion to the use which can be made of machinery.

To illustrate this last idea, let it be supposed that the difference of price, in two countries, of a given quantity of manual labor, requisite to the fabrication of a given article, is as ten; and that some mechanic power is introduced into both countries, which, performing half the necessary labor, leaves only half to be done by hand; it is evident that the difference in the cost of the fabrication of the article in question, in the two countries, as far as it is connected with the price of labor, will be reduced from ten to five, in consequence of the introduction of that power.

This circumstance is worthy of the most particular attention. It diminishes immensely one of the objections most strenuously urged against the success of manufactures in the United States.

To procure all such machines as are known in any part of Europe, can only require a proper division and due pains. The knowledge of several of the most important of them is already possessed. The preparation of them here is, in most cases, practicable on nearly equal terms. As far as they depend on water, some superiority of advantages may be claimed, from the uncommon variety and greater cheapness of situations adapted to mill-seats, with which different parts of the United States abound.

So far as the dearness of labor may be a consequence of the greatness of profits in any branch of business, it is no obstacle to its success. The undertaker can afford to pay the price.

There are grounds to conclude that undertakers of manufactures in this country can, at this time, afford to pay higher wages to the workmen they may employ, than are paid to similar workmen in Europe. The prices of foreign fabrics, in the market of the United States, which

will, for a long time, regulate the prices of the domestic ones, may be considered as compounded of the following ingredients: The first cost of materials, including the taxes, if any, which are paid upon them where they are made; the expense of grounds, buildings, machinery, and tools; the wages of the persons employed in the manufactory; the profits on the capital or stock employed; the commissions of agents to purchase them where they are made; the expense of transportation to the United States, including insurance and other incidental charges; the taxes or duties, if any, and fees of office, which are paid on their exportation; the taxes or duties, and fees of office, which are paid on their importation.

As to the first of these items, the cost of materials, the advantage, upon the whole, is at present on the side of the United States; and the difference in their favor must increase, in proportion as a certain and extensive domestic demand shall induce the proprietors of land to devote more of their attention to the production of those materials. It ought not to escape observation, in a comparison on this point, that some of the principal manufacturing countries of Europe are much more dependent on foreign supply, for the materials of their manufactures, than would be the United States, who are capable of supplying themselves with a greater abundance, as well as a greater variety of the requisite materials.

As to the second item, the expense of grounds, buildings, machinery, and tools, an equality, at least, may be assumed; since advantages, in some particulars, will counterbalance temporary disadvantages in others.

As to the third item, or the article of wages, the comparison certainly turns against the United States; though, as before observed, not in so great a degree as commonly supposed.

The fourth item is alike applicable to the foreign and to the domestic manufacture. It is, indeed, more properly a result, than a particular to be compared.

But, with respect to all the remaining items, they are alone applicable to the foreign manufacture, and, in the strictest sense, extraordinaries; constituting a sum of extra charge on the foreign fabric, which cannot be estimated at less than from fifteen to thirty per cent on the cost of it at the manufactory.

This sum of extra charge may confidently be regarded as more than a counterpoise for the real difference in the price of labor; and is

a satisfactory proof that manufactures may prosper, in defiance of it, in the United States.

To the general allegation, connected with the circumstances of scarcity of hands and dearness of labor, that extensive manufactures can only grow out of a redundant or full population, it will be sufficient to answer generally, that the fact has been otherwise. That the situation alleged to be an essential condition of success, has not been that of several nations, at periods when they had already attained to maturity in a variety of manufactures.

The supposed want of capital for the prosecution of manufactures in the United States, is the most indefinite of the objections which are usually opposed to it.

It is very difficult to pronounce anything precise concerning the real extent of the moneyed capital of a country, and still more, concerning the proportion which it bears to the objects that invite the employment of capital. It is not less difficult to pronounce, how far the effect of any given quantity of money, as capital, or in other words, as a medium for circulating the industry and property of a nation, may be increased by the very circumstance of the additional motion which is given to it, by new objects of employment. That effect, like the momentum of descending bodies, may not improperly be represented as in a compound ratio to mass and velocity. It seems pretty certain that a given sum of money, in a situation in which the quick impulses of commercial activity were little felt, would appear inadequate to the circulation of as great a quantity of industry and property, as in one in which their full influence was experienced.

It is not obvious why the same objection might not as well be made to external commerce as to manufactures: since it is manifest, that our immense tracts of land, occupied and unoccupied, are capable of giving employment to more capital than is actually bestowed upon them. It is certain that the United States offer a vast field for the advantageous employment of capital; but it does not follow that there will not be found, in one way or another, a sufficient fund for the successful prosecution of any species of industry which is likely to prove truly beneficial.

The following considerations are of a nature to remove all inquietude on the score of want of capital:

The introduction of banks, as has been shown on another occasion, has a powerful tendency to extend the active capital of a country. Experience of the utility of these institutions is multiplying them in the

United States. It is probable that they will be established wherever they can exist with advantage; and wherever they can be supported, if administered with prudence, they will add new energies to all pecuniary operations.

The aid of foreign capital may safely, and with considerable latitude, be taken into calculation. Its instrumentality has been long experienced in our external commerce; and it has begun to be felt in various other modes. Not only our funds, but our agriculture, and other internal improvements, have been animated by it. It has already, in a few instances, extended even to our manufactures.

It is a well known fact that there are parts of Europe which have more capital than profitable domestic objects of employment. Hence, among other proofs, the large loans continually furnished to foreign States. And it is equally certain that the capital of other parts may find more profitable employment in the United States than at home. And, notwithstanding there are weighty inducements to prefer the employment of capital at home, even at less profit, to an investment of it abroad, though with greater gain, yet these inducements are overruled, either by a deficiency of employment, or by a very material difference in profit. Both these causes operate to produce a transfer of foreign capital to the United States. It is certain that various objects in this country hold out advantages, which are with difficulty to be equaled elsewhere; and under the increasingly favorable impressions which are entertained of our Government, the attractions will become more and more strong. These impressions will prove a rich mine of prosperity to the country, if they are confirmed and strengthened by the progress of our affairs. And, to secure this advantage, little more is now necessary than to foster industry, and cultivate order and tranquility at home and abroad.

It is not impossible that there may be persons disposed to look, with a jealous eye, on the introduction of foreign capital, as if it were an instrument to deprive our own citizens of the profits of our own industry; but, perhaps, there never could be a more unreasonable jealousy. Instead of being viewed as a rival, it ought to be considered as a most valuable auxiliary, conducing to put in motion a greater quantity of productive labor, and a greater portion of useful enterprise, than could exist without it. It is at least evident that, in a country situated like the United States, with an infinite fund of resources yet to be unfolded, every farthing of foreign capital which is laid out in internal meliora-

tions, and in industrious establishments, of a permanent nature, is a precious acquisition.

And, whatever be the objects which originally attract foreign capital, when once introduced, it may be directed towards any purpose of beneficial exertion which is desired. And to detain it among us, there can be no expedient so effectual, as to enlarge the sphere within which it may be usefully employed: though introduced merely with views to speculations in the funds, it may afterwards be rendered subservient to the interests of agriculture, commerce, and manufactures.

But the attraction of foreign capital for the direct purpose of manufactures ought not to be deemed a chimerical expectation. There are already examples of it, as remarked in another place. And the examples, if the disposition be cultivated, can hardly fail to multiply. There are, also, instances of another kind, which serve to strengthen the expectation. Enterprises for improving the public communications, by cutting canals, opening the obstructions in rivers, and erecting bridges, have received very material aid from the same source.

When the manufacturing capitalist of Europe shall advert to the many important advantages which have been intimated in the course of this report, he cannot but perceive very powerful inducements to a transfer of himself and his capital to the United States. Among the reflections which a most interesting peculiarity of situation is calculated to suggest, it cannot escape his observation, as a circumstance of moment in the calculation, that the progressive population and improvement of the United States insure a continually increasing domestic demand for the fabrics which he shall produce, not to be affected by any external casualties or vicissitudes.

But, while there are circumstances sufficiently strong to authorize a considerable degree of reliance on the aid of foreign capital, towards the attainment of the object in view, it is satisfactory to have good grounds of assurance that there are domestic resources, of themselves adequate to it. It happens that there is a species of capital, actually existing with the United States, which relieves from all inquietude, on the score of want of capital. This is the funded debt.

The effect of a funded debt, as a species of capital, has been noticed upon a former occasion; but a more particular elucidation of the point seems to be required, by the stress which is here laid upon it. This shall, accordingly, be attempted.

Public funds answer the purpose of capital, from the estimation

in which they are usually held by moneyed men; and, consequently, from the ease and dispatch with which they can be turned into money. This capacity of prompt convertibility into money, causes a transfer of stock to be, in a great number of cases, equivalent to a payment in coin. And where it does not happen to suit the party who is to receive, to accept a transfer of stock, the party who is to pay is never at a loss to find, elsewhere, a purchaser of his stock, who will furnish him, in lieu of it, with the coin of which he stands in need.

Hence, in a sound and settled state of the public funds, a man possessed of a sum in them, can embrace any scheme of business which offers, with as much confidence as if he were possessed of an equal sum in coin.

This operation of public funds as capital is too obvious to be denied; but it is objected to the idea of their operating as an augmentation of the capital of the community, that they serve to occasion the destruction of some other capital, to an equal amount.

The capital, which alone they can be supposed to destroy, must consist of—

The annual revenue, which is applied to the payment of interest on the debt, and to the gradual redemption of the principal; the amount of the coin, which is employed in circulating the funds, or, in other words, in effecting the different alienations which they undergo.

But the following appears to be the true and accurate view of this matter.

1st. As to the point of the annual revenue requisite for payment of interest and redemption of principal.

As a determinate proportion will tend to perspicuity in the reasoning, let it be supposed, that the annual revenue to be applied, corresponding with the modification of the six per cent stock of the United States, is in the ratio of eight upon the hundred; that is, in the first instance, six on account of interest, and two on account of principal.

Thus far it is evident that the capital destroyed, to the capital created, would bear no greater proportion than eight to one hundred. There would be withdrawn, from the total mass of other capitals, a sum of eight dollars to be paid to the public creditor; while he would be possessed of a sum of one hundred dollars, ready to be applied to any purpose, to be embarked in any enterprise which might appear to him eligible. Here, then, the augmentation of capital, or the excess of that which is produced beyond that which is destroyed, is equal to ninety-two dollars.

To this conclusion it may be objected that the sum of eight dollars is to be withdrawn annually, until the whole hundred is extinguished; and it may be inferred that, in process of time, a capital will be destroyed equal to that which is at first created.

But it is nevertheless true that, during the whole of the interval, between the creation of the capital of one hundred dollars, and its reduction to a sum not greater than that of the annual revenue appropriated to its redemption, there will be a greater active capital in existence than if no debt had been contracted. The sum drawn from other capitals in any one year will not exceed eight dollars; but there will be, at every instant of time, during the whole period in question, a sum corresponding with so much of the principal as remains unredeemed, in the hands of some person or other, employed or ready to be employed, in some profitable undertaking. There will, therefore, constantly be more capital in capacity to be employed, than capital taken from employment. The excess, for the first year, has been stated to be ninety-two dollars; it will diminish yearly; but there always will be an excess, until the principal of the debt is brought to a level with the redeeming annuity; that is, in the case which has been assumed, by way of example, to eight dollars. The reality of this excess becomes palpable, if it be supposed, as often happens, that the citizen of a foreign country imports into the United States one hundred dollars for the purchase of an equal sum of public debt—here is an absolute augmentation of the mass of circulating coin to the extent of one hundred dollars. At the end of the year, the foreigner is presumed to draw back eight dollars, on account of his principal and interest, but he still leaves ninety-two of his original deposit in circulation, as he, in like manner, leaves eighty-four at the end of the second year, drawing back then, also, the annuity of eight dollars. And thus the matter proceeds: the capital left in circulation diminishing, in each year, and coming nearer to the level of the annuity drawn back. There are, however, some differences in the ultimate operation of the part of the debt which is purchased by foreigners, and that which remains in the hands of citizens. But the general effect in each case, though in different degrees, is, to add to the active capital of the country.

Hitherto, the reasoning has proceeded on a concession of the position, that there is a destruction of some other capital, to the extent of the annuity appropriated to the payment of the interest, and the redemption of the principal of the debt; but in this too much has been conceded.

There is, at most, a temporary transfer of some other capital, to the amount of the annuity, from those who pay, to the creditor, who receives; which he again restores to the circulation, to resume the offices of a capital. This he does either immediately, by employing the money in some branch of industry, or mediately, by lending it to some other person, who does so employ it, or by spending it on his own maintenance. In either supposition, there is no destruction of capital; there is nothing more than a suspension of its motion for a time: that is, while it is passing from the hands of those who pay into the public coffers, and thence, through the public creditor, into some other channel of circulation. When the payments of interest are periodical and quick, and made by the instrumentality of banks, the diversion or suspension of capital may almost be denominated momentary. Hence the deduction, on this account, is far less than it at first sight appears to be.

There is, evidently, as far as regards the annuity, no destruction nor transfer of any other capital than that portion of the income of each individual, which goes to make up the annuity. The land which furnishes the farmer with the sum which he is to contribute, remains the same; and the like may be observed of other capitals. Indeed, as far as the tax, which is the object of contribution (as frequently happens, when it does not oppress by its weight) may have been a motive to greater exertion in any occupation, it may even serve to increase the contributory capital. This idea is not without importance in the general view of the subject.

It remains to see what farther deduction ought to be made from the capital which is created, by the existence of the debt, on account of the coin which is employed in its circulation. This is susceptible of much less precise calculation than the article which has been just discussed. It is impossible to say what proportion of coin is necessary to carry on the alienations which any species of property usually undergoes. The quantity, indeed, varies according to circumstances. But it may still, without hesitation, be pronounced, from the quickness of the rotation, or, rather of the transitions, that the medium of circulation always bears but a small proportion to the amount of the property circulated. And it is thence satisfactorily deducible, that the coin employed in the negotiations of the funds, and which serves to give them activity, as capital, is incomparably less than the sum of the debt negotiated for the purpose of business.

It ought not, however, to be omitted, that the negotiation of the

funds becomes itself a distinct business, which employs, and, by employing, diverts, a portion of the circulating coin from other pursuits. But, making due allowance for this circumstance, there is no reason to conclude that the effect of the diversion of coin, in the whole operation, bears any considerable proportion to the amount of the capital to which it gives activity. The sum of the debt in circulation is continually at the command of any useful enterprise; the coin itself, which circulates it, is never more than momentarily suspended from its ordinary functions. It experiences an incessant and rapid flux and reflux, to and from the channels of industry, to those of speculations in the funds.

There are strong circumstances in confirmation of this theory. The force of moneyed capital, which has been displayed in Great Britain, and the height to which every species of industry has grown up under it, defy a solution, from the quantity of coin which that kingdom has ever possessed. Accordingly, it has been, coeval with its funding system, the prevailing opinion of the men of business, and of the generality of the most sagacious theorists of that country, that the operation of the public funds, as capital, has contributed to the effect in question. Among ourselves, appearances, thus far, favor the same conclusion. Industry in general seems to have been reanimated. There are symptoms indicating an extension of our commerce. Our navigation has certainly of late had a considerable spring; and there appears to be, in many parts of the Union, a command of capital which, till lately, since the revolution, at least, was unknown. But it is at the same time to be acknowledged that other circumstances have concurred (and in a great degree) in producing the present state of things, and that the appearances are not yet sufficiently decisive to be entirely relied upon.

In the question under discussion it is important to distinguish between an absolute increase of capital, or an accession of real wealth, and an artificial increase of capital, as an engine of business, or as an instrument of industry and commerce. In the first sense, a funded debt has no pretensions to being deemed an increase of capital; in the last, it has pretensions which are not easy to be controverted. Of a similar nature is bank credit; and, in an inferior degree, every species of private credit.

But, though a funded debt is not, in the first instance, an absolute increase of capital, or an augmentation of real wealth; yet, by serving as a new power in the operations of industry, it has, within certain bounds, a tendency to increase the real wealth of a community, in like

manner, as money, borrowed by a thrifty farmer, to be laid out in the improvement of his farm, may in the end add to his stock of real riches.

There are respectable individuals who, from a just aversion to an accumulation of public debt, are unwilling to concede to it any kind of utility; who can discern no good to alleviate the ill with which they suppose it pregnant; who cannot be persuaded that it ought, in any sense, to be viewed as an increase of capital, lest it should be inferred that, the more debt, the more capital; the greater the burthens, the greater the blessings of the community.

But it interests the public councils to estimate every object as it truly is; to appreciate how far the good, in any measure, is compensated by the ill, or the ill by the good; either of them is seldom unmixed.

Neither will it follow that an accumulation of debt is desirable, because a certain degree of it operates as capital. There may be a plethora in the political as in the natural body; there may be a state of things in which any such artificial capital is unnecessary. The debt, too, may be swelled to such a size as that the greatest part of it may cease to be useful as a capital, serving only to pamper the dissipation of idle and dissolute individuals; as that the sums required to pay the interest upon it may become oppressive, and beyond the means which a government can employ, consistently with its tranquility, to raise them; as that the resources of taxation to face the debt may have been strained too far to admit of extensions adequate to exigencies which regard the public safety.

Where this critical point is, cannot be pronounced; but it is impossible to believe that there is not such a point.

And as the vicissitudes of nations beget a perpetual tendency to the accumulation of debt, there ought to be, in every government, a perpetual, anxious, and unceasing effort to reduce that which at any time exists, as fast as shall be practicable, consistently with integrity and good faith.

Reasonings on a subject comprehending ideas so abstract and complex, so little reducible to a precise calculation, as those which enter into the question just discussed, are always attended with a danger of running into fallacies. Due allowance ought, therefore, to be made for this possibility. But, as far as the nature of the subject admits of it, there appears to be satisfactory ground for a belief that the public funds operate as a resource of capital to the citizens of the United States; and, if they are a resource at all, it is an extensive one.

To all the arguments which are brought to evince the impracticability of success in manufacturing establishments in the United States, it might have been a sufficient answer to have referred to the experience of what has been already done. It is certain that several important branches have grown up and flourished, with a rapidity which surprises, affording an encouraging assurance of success in future attempts. Of these it may not be improper to enumerate the most considerable:

1. *Of Skins.*—Tanned and tawed leather, dressed skins, shoes, boots, and slippers, harness and saddlery of all kinds, portmanteaus and trunks, leather breeches, gloves, muffs, and tippets, parchment and glue.

2. *Of Iron.*—Bar and sheet iron, steel, nail rods and nails, implements of husbandry, stoves, pots, and other household utensils, the steel and iron work of carriages, and for ship building, anchors, scale beams and weights, and various tools of artificers, arms of different kinds; though the manufacture of these last has of late diminished for want of demand.

3. *Of Wood.*—Ships, cabinet wares, and turnery, wool and cotton cards, and other machinery for manufactures and husbandry, mathematical instruments, coopers' wares of every kind.

4. *Of Flax and Hemp.*—Cables, sail cloth, cordage, twine, and pack thread.

5. Bricks and coarse tiles, and potters' wares.

6. Ardent spirits and malt liquors.

7. Writing and printing paper, sheathing and wrapping paper, pasteboard, fullers' or press papers, paper hangings.

8. Hats of fur and wool, and mixtures of both; women's stuff and silk shoes.

9. Refined sugars.

10. Oils of animals and seeds, soap, spermaceti and tallow candles.

11. Copper and brass wires, particularly utensils for distillers, sugar refiners, and brewers; andirons and other articles for household use, philosophical apparatus.

12. Tin wares for most purposes of ordinary use.

13. Carriages of all kinds.

14. Snuff, chewing and smoking tobacco.

15. Starch and hair powder.

16. Lampblack, and other painters' colors.

17. Gunpowder.

Besides manufactories of these articles, which are carried on as regular trades, and have attained to a considerable degree of maturity, there is a vast scene of household manufacturing, which contributes more largely to the supply of the community than could be imagined, without having made it an object of particular inquiry. This observation is the pleasing result of the investigation to which the subject of this report has led, and is applicable as well to the Southern as to the

Middle and Northern States. Great quantities of coarse cloths, coatings, serges, and flannels, linsey woolseys, hosiery of wool, cotton, and thread, coarse fustians, jeans, and muslins, checked and striped cotton and linen goods, bed-ticks, coverlets and counterpanes, tow linens, coarse shirtings, sheetings, toweling, and table linen, and various mixtures of wool and cotton, and of cotton and flax, are made in the household way, and, in many instances, to an extent not only sufficient for the supply of the families in which they are made, but for sale, and even, in some cases, for exportation. It is computed in a number of districts that two-thirds, three-fourths, and even four-fifths, of all the clothing of the inhabitants, are made by themselves. The importance of so great a progress as appears to have been made in family manufactures, within a few years, both in a moral and political view, renders the fact highly interesting.

Neither does the above enumeration comprehend all the articles that are manufactured, as regular trades. Many others occur, which are equally well established, but which, not being of equal importance, have been omitted. And there are many attempts, still in their infancy, which though attended with very favorable appearances, could not have been properly comprised in an enumeration of manufactories already established. There are other articles, also, of great importance, which, though strictly speaking, manufactures, are omitted, as being immediately connected with husbandry: such are flour, pot and pearl ashes, pitch, tar, turpentine, and the like.

There remains to be noticed an objection to the encouragement of manufactures, of a nature different from those which question the probability of success. This is derived from its supposed tendency to give a monopoly of advantages to particular classes, at the expense of the rest of the community, who, it is affirmed, would be able to procure the requisite supplies of manufactured articles on better terms from foreigners than from our own citizens; and who, it is alleged, are reduced to the necessity of paying an enhanced price for whatever they want, by every measure which obstructs the free competition of foreign commodities.

It is not an unreasonable supposition, that measures which serve to abridge the free competition of foreign articles, have a tendency to occasion an enhancement of prices; and it is not to be denied that such is the effect, in a number of cases; but the fact does not uniformly correspond with the theory. A reduction of prices has, in several instances,

immediately succeeded the establishment of a domestic manufacture. Whether it be that foreign manufacturers endeavor to supplant, by underselling our own, or whatever else be the cause, the effect has been such as is stated, and the reverse of what might have been expected.

But, though it were true that the immediate and certain effect of regulations controlling the competition of foreign with domestic fabrics was an increase of price, it is universally true that the contrary is the ultimate effect with every successful manufacture. When a domestic manufacture has attained to perfection, and has engaged in the prosecution of it a competent number of persons, it invariably becomes cheaper. Being free from the heavy charges which attend the importation of foreign commodities, it can be afforded, and accordingly seldom ever fails to be sold cheaper, in process of time, than was the foreign article for which it is a substitute. The internal competition which takes place, soon does away everything like monopoly, and by degrees reduces the price of the article to the minimum of a reasonable profit on the capital employed. This accords with the reason of the thing, and with experience.

Whence it follows that it is the interest of a community, with a view to eventual and permanent economy, to encourage the growth of manufactures. In a national view, a temporary enhancement of price must always be well compensated by a permanent reduction of it.

It is a reflection which may with propriety be indulged here, that this eventual diminution of the prices of manufactured articles, which is the result of internal manufacturing establishments, has a direct and very important tendency to benefit agriculture. It enables the farmer to procure, with a smaller quantity of his labor, the manufactured produce of which he stands in need, and consequently increases the value of his income and property.

The objections which are commonly made to the expediency of encouraging, and to the probability of succeeding in manufacturing pursuits in the United States, having now been discussed, the considerations which have appeared in the course of the discussion, recommending that species of industry to the patronage of the Government will be materially strengthened by a few general, and some particular topics, which have been naturally reserved for subsequent notice.

1. There seems to be a moral certainty that the trade of a country which is both manufacturing and agricultural, will be more lucrative and prosperous than that of a country which is merely agricultural.

One reason for this is found in that general effort of nations (which has been already mentioned) to procure from their own soils the articles of prime necessity requisite to their own consumption and use, and which serves to render their demand for a foreign supply of such articles, in a great degree, occasional and contingent. Hence while the necessities of nations, exclusively devoted to agriculture, for the fabrics of manufacturing States, are constant and regular, the wants of the latter for the products of the former are liable to very considerable fluctuations and interruptions. The great inequalities resulting from difference of seasons have been, elsewhere, remarked. This uniformity of demand on one side, and unsteadiness of it on the other, must necessarily have a tendency to cause the general course of the exchange of commodities between the parties to turn to the disadvantage of the merely agricultural States. Peculiarity of situation, a climate and soil adapted to the production of peculiar commodities, may sometimes contradict the rule, but there is every reason to believe that it will be found, in the main, a just one.

Another circumstance, which gives a superiority of commercial advantages to States that manufacture as well as cultivate, consists in the more numerous attractions which a more diversified market offers to foreign customers, and in the greater scope which it affords to mercantile enterprise. It is a position of indisputable truth, in commerce, depending, too, on very obvious reasons, that the greatest resort will ever be to those marts where commodities, while equally abundant, are most various. Each difference of kind holds out an additional inducement: and it is a position not less clear, that the field of enterprise must be enlarged to the merchants of a country, in proportion to the variety, as well as the abundance of commodities which they find at home, for exportation to foreign markets.

A third circumstance, perhaps not inferior to either of the other two, conferring the superiority which has been stated, has relation to the stagnations of demand for certain commodities, which, at some time or other, interfere more or less with the sale of all. The nation which can bring to market but few articles, is likely to be more quickly and sensibly affected by such stagnations, than one which is always possessed of a great variety of commodities; the former frequently finds too great a proportion of its stock of materials for sale or exchange, lying on hand, or is obliged to make injurious sacrifices to supply its wants of foreign articles, which are numerous and urgent, in proportion

to the smallness of the number of its own. The latter commonly finds itself indemnified by the high prices of some articles, for the low prices of others; and the prompt and advantageous sale of those articles which are in demand, enables its merchants the better to wait for a favorable change in respect to those which are not. There is ground to believe that a difference of situation, in this particular, has immensely different effects upon the wealth and prosperity of nations.

From these circumstances, collectively, two important inferences are to be drawn: one, that there is always a higher probability of a favorable balance of trade, in regard to countries in which manufactures, founded on the basis of a thriving agriculture, flourish, than in regard to those which are confined wholly, or almost wholly, to agriculture; the other (which is also a consequence of the first), that countries of the former description are likely to possess more pecuniary wealth, or money, than those of the latter.

Facts appear to correspond with this conclusion. The importations of manufactured supplies seem invariably to drain the merely agricultural people of their wealth. Let the situation of the manufacturing countries of Europe be compared, in this particular, with that of countries which only cultivate, and the disparity will be striking. Other causes, it is true, help to account for this disparity between some of them; and among these causes, the relative state of agriculture; but between others of them, the most prominent circumstance of dissimiltude arises from the comparative state of manufactures. In corroboration of the same idea, it ought not to escape remark, that the West India islands, the soils of which are the most fertile, and the nation which, in the greatest degree, supplies the rest of the world with the precious metals, exchange to a loss, with almost every other country.

As far as experience at home may guide, it will lead to the same conclusion. Previous to the Revolution, the quantity of coin possessed by the colonies which now compose the United States appeared to be inadequate to their circulation; and their debt to Great Britain was progressive. Since the Revolution the States in which manufactures have most increased, have recovered fastest from the injuries of the late war, and abound most in pecuniary resources.

It ought to be admitted, however, in this, as in the preceding case, that causes irrelative to the state of manufactures account, in a degree, for the phenomena remarked. The continual progress of new settlements has a natural tendency to occasion an unfavorable balance of

trade; though it indemnifies for the inconvenience, by that increase of the national capital which flows from the conversion of waste into improved lands: and the different degrees of external commerce which are carried on by the different States may make material differences in the comparative state of their wealth. The first circumstance has reference to the deficiency of coin, and the increase of debt previous to the Revolution; the last, to the advantages which the most manufacturing States appear to have enjoyed over the others, since the termination of the late war.

But the uniform appearance of an abundance of specie, as the concomitant of a flourishing state of manufactures, and of the reverse, where they do not prevail, afford a strong presumption of their favorable operation upon the wealth of a country.

Not only the wealth, but the independence and security of a country, appear to be materially connected with the prosperity of manufactures. Every nation, with a view to those great objects, ought to endeavor to possess within itself all the essentials of national supply. These comprise the means of subsistence, habitation, clothing, and defense.

The possession of these is necessary to the perfection of the body politic; to the safety as well as to the welfare of the society. The want of either is the want of an important organ of political life and motion; and in the various crises which await a State, it must severely feel the effects of any such deficiency. The extreme embarrassments of the United States during the late war, from an incapacity of supplying themselves, are still matter of keen recollection; a future war might be expected again to exemplify the mischiefs and dangers of a situation, to which that incapacity is still, in too great a degree, applicable, unless changed by timely and vigorous exertion. To effect this change, as fast as shall be prudent, merits all the attention and all the zeal of our public councils: 'tis the next great work to be accomplished.

The want of a navy, to protect our external commerce, as long as it shall continue, must render it a peculiarly precarious reliance for the supply of essential articles, and must serve to strengthen prodigiously the arguments in favor of manufactures.

To these general considerations are added some of a more particular nature.

Our distance from Europe, the great fountain of manufactured supply, subjects us, in the existing state of things, to inconvenience and loss, in two ways.

The bulkiness of those commodities, which are the chief productions of the soil, necessarily imposes very heavy charges on their transportation to distant markets. These charges, in the cases in which the nations to whom our products are sent, maintain a competition in the supply of their own markets, principally fall upon us, and form material deductions from the primitive value of the articles furnished. The charges on manufactured supplies, brought from Europe, are greatly enhanced by the same circumstances of distance. These charges, again, in the cases in which our own industry maintains no competition in our own markets, also principally fall upon us, and are an additional cause of extraordinary deduction from the primitive value of our own products; these being the materials of exchange for the foreign fabrics which we consume.

The equality and moderation of individual property, and the growing settlements of new districts, occasion, in this country, an unusual demand for coarse manufactures; the charges of which being greater in proportion to their greater bulk, augment the disadvantage which has been just described.

As, in most countries, domestic supplies maintain a very considerable competition with such foreign productions of the soil as are imported for sale, if the extensive establishment of manufactories in the United States does not create a similar competition in respect to manufactured articles, it appears to be clearly deducible, from the considerations which have been mentioned, that they must sustain a double loss in their exchanges with foreign nations, strongly conducive to an unfavorable balance of trade, and very prejudicial to their interests.

These disadvantages press with no small weight on the landed interest of the country. In seasons of peace, they cause a serious deduction from the intrinsic value of the products of the soil. In the time of a war, which should either involve ourselves, or another nation possessing a considerable share of our carrying trade, the charges on the transportation of our commodities, bulky as most of them are, could hardly fail to prove a grievous burthen to the farmer, while obliged to depend, in so great a degree as he now does, upon foreign markets, for the vent of the surplus of his labor.

As far as the prosperity of the fisheries of the United States is impeded by the want of an adequate market, there arises another special reason for desiring the extension of manufactures. Besides the fish, which in many places would be likely to make a part of the subsistence

of the persons employed, it is known that the oils, bones, and skins of marine animals, are of extensive use in various manufactures. Hence, the prospect of an additional demand for the produce of the fisheries.

One more point of view only remains, in which to consider the expediency of encouraging manufactures in the United States.

It is not uncommon to meet with an opinion that, though the promoting of manufactures may be the interest of a part of the Union, it is contrary to that of another part. The northern and southern regions are sometimes represented as having adverse interests in this respect. Those are called manufacturing, these agricultural States; and a species of opposition is imagined to subsist between the manufacturing and agricultural interests.

This idea of an opposition between those two interests is the common error of the early periods of every country; but experience gradually dissipates it. Indeed, they are perceived so often to succor and befriend each other, that they come at length to be considered as one—a supposition which has been frequently abused, and is not universally true. Particular encouragements of particular manufactures may be of a nature to sacrifice the interests of landholders to those of manufacturers; but it is nevertheless a maxim, well established by experience, and generally acknowledged, where there has been sufficient experience, that the aggregate prosperity of manufactures and aggregate prosperity of agriculture are intimately connected. In the course of the discussion which has had place, various weighty considerations have been adduced, operating in support of that maxim. Perhaps the superior steadiness of the demand of a domestic market, for the surplus produce of the soil, is alone a convincing argument of its truth.

Ideas of a contrariety of interests between the northern and southern regions of the Union are, in the main, as unfounded as they are mischievous. The diversity of circumstances, on which such contrariety is usually predicated, authorizes a directly contrary conclusion. Mutual wants constitute one of the strongest links of political connection; and the extent of these bears a natural proportion to the diversity in the means of mutual supply.

Suggestions of an opposite complexion are ever to be deplored, as unfriendly to the steady pursuit of one great common cause, and to the perfect harmony of all the parts.

In proportion as the mind is accustomed to trace the intimate connection of interest which subsists between all the parts of a society,

united under the same government, the infinite variety of channels will serve to circulate the prosperity of each, to and through the rest—in that proportion will it be little apt to be disturbed by solicitudes and apprehensions, which originate in local discriminations.

It is a truth, as important as it is agreeable, and one to which it is not easy to imagine exceptions, that everything tending to establish substantial and permanent order in the affairs of a country, to increase the total mass of industry and opulence, is ultimately beneficial to every part of it. On the credit of this great truth, an acquiescence may safely be accorded, from every quarter, to all institutions and arrangements which promise a confirmation of public order and an augmentation of national resource.

But there are more particular considerations which serve to fortify the idea that the encouragement of manufactures is the interest of all parts of the Union. If the Northern and Middle States should be the principal scenes of such establishments, they would immediately benefit the more southern, by creating a demand for productions, some of which they have in common with the other States, and others, which are either peculiar to them, or more abundant, or of better quality, than elsewhere. These productions, principally, are timber, flax, hemp, cotton, wool, raw silk, indigo, iron, lead, furs, hides, skins, and coals; of these articles, cotton and indigo are peculiar to the Southern States, as are, hitherto, lead and coal; flax and hemp are, or may be, raised in greater abundance there, than in the more Northern States; and the wool of Virginia is said to be of better quality than that of any other State—a circumstance rendered the more probable by the reflection that Virginia embraces the same latitudes with the finest wool countries of Europe. The climate of the South is also better adapted to the production of silk.

The extensive cultivation of cotton can, perhaps, hardly be expected but from the previous establishment of domestic manufactories of the article; and the surest encouragement and vent for the others would result from similar establishments in respect to them.

If, then, it satisfactorily appears that it is the interest of the United States, generally, to encourage manufactures, it merits particular attention, that there are circumstances which render the present a critical moment for entering, with zeal, upon the important business. The effort cannot fail to be materially seconded by a considerable and increasing influx of money, in consequence of foreign speculations in the funds, and by the disorders which exist in different parts of Europe.

The first circumstance not only facilitates the execution of manufacturing enterprises, but it indicates them as a necessary mean to turn the thing itself to advantage, and to prevent its being eventually an evil. If useful employment be not found for the money of foreigners, brought to the country to be invested in purchases of the public debt, it will quickly be re-exported, to defray the expense of an extraordinary consumption of foreign luxuries; and distressing drains of our species may, hereafter, be experienced, to pay the interest and redeem the principal of the purchased debt.

This useful employment, too, ought to be of a nature to produce solid and permanent improvements. If the money merely serves to give a temporary spring to foreign commerce; as it cannot procure new and lasting outlets for the products of the country, there will be no real or durable advantage gained. As far as it shall find its way in agricultural meliorations, in opening canals, and in similar improvements, it will be productive of substantial utility. But there is reason to doubt whether, in such channels, it is likely to find sufficient employment; and still more, whether many of those who possess it would be as readily attracted to objects of this nature as to manufacturing pursuits, which bear greater analogy to those to which they are accustomed, and to the spirit generated by them.

To open the one field, as well as the other, will at least secure a better prospect of useful employment for whatever accession of money there has been or may be.

There is, at the present juncture, a certain fermentation of mind, a certain activity of speculation and enterprise, which, if properly directed, may be made subservient to useful purposes; but which, if left entirely to itself, may be attended with pernicious effects.

The disturbed state of Europe, inclining its citizens to emigration, the requisite workmen will be more easily acquired than at another time; and the effect of multiplying the opportunities of employment to those who emigrate, may be an increase of the number and extent of valuable acquisitions to the population, arts, and industry, of the country.

To find pleasure in the calamities of other nations would be criminal; but to benefit ourselves, by opening an asylum to those who suffer in consequence of them, is as justifiable as it is politic.

A full view having now been taken of the inducements to the promotion of manufactures in the United States, accompanied with an examination of the principal objections which are commonly urged in

opposition, it is proper, in the next place, to consider the means by which it may be effected, as introductory to a specification of the objects, which, in the present state of things, appear the most fit to be encouraged, and of the particular measures which it may be advisable to adopt, in respect to each.

In order to a better judgment of the means proper to be resorted to by the United States, it will be of use to advert to those which have been employed with success in other countries. The principal of these are:

1. *Protecting duties—or duties on those foreign articles which are the rivals of the domestic ones intended to be encouraged.*

Duties of this nature evidently amount to a virtual bounty on the domestic fabrics; since, by enhancing the charges on foreign articles, they enable the national manufacturers to undersell all their foreign competitors. The propriety of this species of encouragement need not be dwelt upon, as it is not only a clear result from the numerous topics which have been suggested, but is sanctioned by the laws of the United States, in a variety of instances; it has the additional recommendation of being a resource of revenue. Indeed, all the duties imposed on imported articles, though with an exclusive view to revenue, have the effect, in contemplation, and, except where they fall on raw materials, wear a beneficent aspect towards the manufacturers of the country.

2. *Prohibitions of rival articles, or duties equivalent to prohibitions.*

This is another and an efficacious mean of encouraging national manufactures; but in general it is only fit to be employed when a manufacture has made such progress, and is in so many hands, as to insure a due competition, and an adequate supply on reasonable terms. Of duties equivalent to prohibitions, there are examples in the laws of the United States; and there are other cases, to which the principle may be advantageously extended, but they are not numerous.

Considering a monopoly of the domestic market to its own manufacturers as the reigning policy of manufacturing nations, a similar policy, on the part of the United States, in every proper instance, is dictated, it might almost be said, by the principles of distributive justice; certainly by the duty of endeavoring to secure to their own citizens a reciprocity of advantages.

3. *Prohibitions of the exportation of the materials of manufactures.*

The desire of securing a cheap and plentiful supply for the national workmen, and where the article is either peculiar to the country, or of peculiar quality there, the jealousy of enabling foreign work-

men to rival those of the nation with its own materials, are the leading motives to this species of regulation. It ought not to be affirmed, that it is in no instance proper; but is certainly one which ought to be adopted with great circumspection, and only in very plain cases. It is seen at once that its immediate operation is to abridge the demand, and keep down the price of the produce of some other branch of industry—generally speaking, of agriculture—to the prejudice of those who carry it on; and though, if it be really essential to the prosperity of any very important national manufacture, it may happen that those who are injured, in the first instance, may be eventually indemnified by the superior steadiness of an extensive domestic market, depending on that prosperity; yet, in a matter in which there is so much room for nice and difficult combinations, in which such opposite considerations combat each other, prudence seems to dictate that the expedient in question ought to be indulged with a sparing hand.

4. *Pecuniary bounties.*

This has been found one of the most efficacious means of encouraging manufactures, and is, in some views, the best. Though it has not yet been practiced upon by the Government of the United States (unless the allowance on the expiration of dried and pickled fish and salted meat could be considered as a bounty), and though it is less favored by public opinion than some other modes, its advantages are these:

1. It is a species of encouragement more positive and direct than any other, and, for that very reason, has a more immediate tendency to stimulate and uphold new enterprises, increasing the chances of profit, and diminishing the risks of loss, in the first attempts.

2. It avoids the inconvenience of a temporary augmentation of price, which is incident to some other modes; or it produces it to a less degree, either by making no addition to the charges on the rival foreign article, as in the case of protecting duties, or by making a smaller addition. The first happens when the fund for the bounty is derived from a different object (which may or may not increase the price of some other article, according to the nature of that object), the second, when the fund is derived from the same, or a similar object, of foreign manufacture. One per cent duty on the foreign article, converted into a bounty on the domestic, will have an equal effect with a duty of two per cent exclusive of such bounty; and the price of the foreign commodity is liable to be raised, in the one case, in the proportion of one per cent; in the other in that of two per cent. Indeed the bounty, when

drawn from another source, is calculated to promote a reduction of price; because, without laying any new charge on the foreign article, it serves to introduce a competition with it, and to increase the total quantity of the article in the market.

3. Bounties have not, like high protecting duties, a tendency to produce scarcity. An increase of price is not always the immediate, though, where the progress of a domestic manufacture does not counteract a rise, it is commonly the ultimate effect of an additional duty. In the interval between the laying of the duty and the proportional increase of price, it may discourage importation, by interfering with the profits to be expected from the sale of the article.

4. Bounties are sometimes not only the best, but the only proper expedient for uniting the encouragement of a new object of agriculture with that of a new object of manufacture. It is the interest of the farmer to have the production of the raw material promoted by counteracting the interference of the foreign material of the same kind. It is the interest of the manufacturer to have the material abundant and cheap. If, prior to the domestic production of the material, in sufficient quantity to supply the manufacturer on good terms, a duty be laid upon the importation of it from abroad, with a view to promote the raising of it at home, the interest both of the farmer and manufacturer will be disserved. By either destroying the requisite supply, or raising the price of the article beyond what can be afforded to be given for it by the conductor of an infant manufacture, it is abandoned or fails, and there being no domestic manufactories to create a demand for the raw material, which is raised by the farmer, it is in vain that the competition of the like foreign article may have been destroyed.

It cannot escape notice, that a duty upon the importation of an article can no otherwise aid the domestic production of it, than by giving the latter greater advantages in the home market. It can have no influence upon the advantageous sale of the article produced in foreign markets—no tendency, therefore, to promote its exportation.

The true way to conciliate these two interests is to lay a duty on foreign manufactures of the material, the growth of which is desired to be encouraged, and to apply the produce of that duty, by way of bounty, either upon the production of the material itself, or upon its manufacture at home, or upon both. In this disposition of the thing, the manufacturer commences his enterprise under every advantage which is attainable, as to quantity or price of the raw material; and

the farmer, if the bounty be immediately to him, is enabled by it to enter into a successful competition with the foreign material. If the bounty be to the manufacturer, on so much of the domestic material as he consumes, the operation is nearly the same; he has a motive of interest to prefer the domestic commodity, if of equal quality, even at a higher price than the foreign, so long as the difference of price is anything short of the bounty which is allowed upon the article.

Except the simple and ordinary kinds of household manufacture, or those for which there are very commanding local advantages, pecuniary bounties are, in most cases, indispensable to the introduction of a new branch. A stimulus and a support, not less powerful and direct, is, generally speaking, essential to the overcoming of the obstacles which arise from the competitions of superior skill and maturity elsewhere. Bounties are especially essential in regard to articles upon which those foreigners, who have been accustomed to supply a country, are in the practice of granting them.

The continuance of bounties on manufactures long established, must always be of questionable policy: because a presumption would arise, in every such case, that there were natural and inherent impediments to success. But in new undertakings they are as justifiable as they are oftentimes necessary.

There is a degree of prejudice against bounties, from an appearance of giving away the public money without an immediate consideration, and from a supposition that they serve to enrich particular classes, at the expense of the community.

But neither of these sources of dislike will bear a serious examination. There is no purpose to which public money can be more beneficially applied, than to the acquisition of a new and useful branch of industry; no consideration more valuable than a permanent addition to the general stock of productive labor.

As to the second source of objection, it equally lies against other modes of encouragement, which are admitted to be eligible. As often as a duty upon a foreign article makes an addition to its price, it causes an extra expense to the community, for the benefit of the domestic manufacturer. A bounty does no more. But it is the interest of the society, in each case, to submit to the temporary expense—which is more than compensated by an increase of industry and wealth; by an augmentation of resources and independence; and by the circumstance of eventual cheapness, which has been noticed in another place.

It would deserve attention, however, in the employment of this species of encouragement in the United States, as a reason for moderating the degree of it in the instances in which it might be deemed eligible, that the great distance of this country from Europe imposes very heavy charges on all the fabrics which are brought from thence, amounting to from fifteen to thirty per cent on their value, according to their bulk.

A question has been made concerning the constitutional right of the Government of the United States to apply this species of encouragement; but there is certainly no good foundation for such a question. The national legislature has express authority "to lay and collect taxes, duties, imposts, and excises, to pay the debts, and provide for the common defense and general welfare," with no other qualifications than that "all duties, imposts and excises, shall be uniform throughout the United States; and that no capitation or other direct tax shall be laid, unless in proportion to numbers, ascertained by a census or enumeration, taken on the principles prescribed in the constitution," and that "no tax or duty shall be laid on articles exported from any State."

These three qualifications excepted, the power to raise money is plenary and indefinite, and the objects to which it may be appropriated are no less comprehensive than the payment of the public debts, and the providing for the common defense and general welfare. The terms "general welfare" were doubtless intended to signify more than was expressed or imported in those which preceded; otherwise, numerous exigencies incident to the affairs of a nation would have been left without a provision. The phrase is as comprehensive as any that could have been used; because it was not fit that the constitutional authority of the Union to appropriate its revenues should have been restricted within narrower limits than the "general welfare;" and because this necessarily embraces a vast variety of particulars, which are susceptible neither of specification nor of definition.

It is, therefore, of necessity, left to the discretion of the national legislature to pronounce upon the objects which concern the general welfare, and for which, under that description, an appropriation of money is requisite and proper. And there seems to be no room for a doubt, that whatever concerns the general interests of learning, of agriculture, of manufactures, and of commerce, are within the sphere of the national councils, as far as regards an application of money.

The only qualification of the generality of the phrase in question, which seems to be admissible, is this: That the object, to which an

appropriation of money is to be made, be general, and not local; its operation extending, in fact, or by possibility, throughout the Union, and not being confined to a particular spot.

No objection ought to arise to this construction, from a supposition that it would imply a power to do whatever else should appear to Congress conducive to the general welfare. A power to appropriate money with this latitude, which is granted, too, in express terms, would not carry a power to do any other thing not authorized in the constitution, either expressly or by fair implication.

5. *Premiums.*

These are of a nature allied to bounties, though distinguishable from them in some important features.

Bounties are applicable to the whole quantity of an article produced, or manufactured, or exported, and involve a correspondent expense. Premiums serve to reward some particular excellence or superiority, some extraordinary exertion or skill, and are dispensed only in a small number of cases. But their effect is to stimulate general effort; contrived so as to be both honorary and lucrative, they address themselves to different passions—touching the chords, as well of emulation as of interest. They are, accordingly, a very economical mean of exciting the enterprise of a whole community.

There are various societies, in different countries, whose object is the dispensation of premiums for the encouragement of agriculture, arts, manufactures, and commerce; and though they are, for the most part, voluntary associations, with comparatively slender funds, their utility has been immense. Much has been done by this mean in Great Britain. Scotland, in particular, owes, materially to it, a prodigious amelioration of condition. From a similar establishment in the United States, supplied and supported by the Government of the Union, vast benefits might reasonably be expected. Some further ideas on this head shall, accordingly, be submitted in the conclusion of this report.

6. *The exemption of the materials of manufactures from duty.*

The policy of that exemption, as a general rule, particularly in reference to new establishments, is obvious. It can hardly ever be advisable to add the obstructions of fiscal burthens to the difficulties which naturally embarrass a new manufacture; and where it is matured, and in condition to become an object of revenue, it is, generally speaking, better that the fabric, than the material, should be the subject of taxation. Ideas of proportion between the quantum of the tax and the

value of the article, can be more easily adjusted in the former than in the latter case. An argument for exemptions of this kind, in the United States, is to be derived from the practice, as far as their necessities have permitted, of those nations whom we are to meet as competitors in our own and in foreign markets.

There are, however, exceptions to it, of which some examples will be given under the next head.

The laws of the Union afford instances of the observance of the policy here recommended, but it will probably be found advisable to extend it to some other cases. Of a nature, bearing some affinity to that policy, is the regulation which exempts from duty the tools and implements, as well as the books, clothes, and household furniture, of foreign artists, who come to reside in the United States—an advantage already secured to them by the laws of the Union, and which it is, in every view, proper to continue.

7. Drawbacks of the duties which are imposed on the materials of manufactures.

It has already been observed, as a general rule, that duties on those materials ought, with certain exceptions, to be forborne. Of these exceptions, three cases occur, which may serve as examples. One, where the material is itself an object of general or extensive consumption, and a fit and productive source of revenue. Another, where a manufacture of a simpler kind, the competition of which, with a like domestic article, is desired to be restrained, partakes of the nature of a raw material, from being capable, by a farther process, to be converted into a manufacture of a different kind, the introduction or growth of which is desired to be encouraged. A third, where the material itself is a production of the country, and in sufficient abundance to furnish a cheap and plentiful supply to the national manufacturers.

Under the first description comes the article of molasses. It is not only a fair object of revenue, but, being a sweet, it is just that the consumers of it should pay a duty as well as the consumers of sugar.

Cottons and linens, in their white state, fall under the second description. A duty upon such as are imported is proper, to promote the domestic manufacture of similar articles, in the same state. A drawback of that duty is proper, to encourage the printing and staining, at home, of those which are brought from abroad. When the first of these manufactures has attained sufficient maturity in a country to furnish a full supply for the second, the utility of the drawback ceases.

The article of hemp either now does, or may be expected soon to, exemplify the third case in the United States.

Where duties on the materials of manufactures are not laid for the purpose of preventing a competition with some domestic production, the same reasons which recommend, as a general rule, the exemption of those materials from duties, would recommend, as a like general rule, the allowance of drawbacks in favor of the manufacturer. Accordingly, such drawbacks are familiar in countries which systematically pursue the business of manufactures; which furnishes an argument for the observance of a similar policy in the United States; and the idea has been adopted by the laws of the Union, in the instances of salt and molasses. It is believed that it will be found advantageous to extend it to some other articles.

8. *The encouragement of new inventions and discoveries at home, and of the introduction into the United States of such as may have been made in other countries; particularly, those which relate to machinery.*

This is among the most useful and unexceptionable of the aids which can be given to manufactures. The usual means of that encouragement are pecuniary rewards, and, for a time, exclusive privileges. The first must be employed according to the occasion, and the utility of the invention or discovery. For the last, so far as respects "authors and inventors," provision has been made by law. But it is desirable, in regard to improvements and secrets of extraordinary value, to be able to extend the same benefit to introducers, as well as authors and inventors; a policy which has been practiced with advantage in other countries. Here, however, as in some other cases, there is cause to regret that the competency of the authority of the National Government to the good which might be done, is not without a question. Many aids might be given to industry, many internal improvements of primary magnitude might be promoted, by an authority operating throughout the Union, which cannot be effected as well, if at all, by an authority confirmed within the limits of a single State.

But if the legislature of the Union cannot do all the good that might be wished, it is, at least, desirable that all may be done which is practicable. Means for promoting the introduction of foreign improvements, though less efficaciously than might be accomplished with more adequate authority, will form a part of the plan intended to be submitted in the close of this report.

It is customary with manufacturing nations to prohibit, under severe penalties, the exportation of implements and machines which they have either invented or improved. There are already objects for a similar regulation in the United States; and others may be expected to occur, from time to time. The adoption of it seems to be dictated by the principle of reciprocity. Greater liberality, in such respects, might better comport with the general spirit of the country; but a selfish and exclusive policy in other quarters will not always permit the free indulgence of a spirit which would place us upon an unequal footing. As far as prohibitions tend to prevent foreign competitors from deriving the benefit of the improvements made at home, they tend to increase the advantages of those by whom they may have been introduced, and operate as an encouragement to exertion.

9. *Judicious regulations for the inspection of manufactured commodities.*

This is not among the least important of the means by which the prosperity of manufactures may be promoted. It is, indeed, in many cases, one of the most essential. Contributing to prevent frauds upon consumers at home, and exporters to foreign countries; to improve the quality, and preserve the character of the national manufactures; it cannot fail to aid the expeditious and advantageous sale of them, and to serve as a guard against successful competition from other quarters. The reputation of the flour and lumber of some States, and of the potash of others, has been established by an attention to this point. And the like good name might be procured for those articles, wheresoever produced, by a judicious and uniform system of inspection, throughout the ports of the United States. A like system might also be extended with advantage to other commodities.

10. *The facilitating of pecuniary remittances from place to place—*

Is a point of considerable moment to trade in general, and to manufactures in particular, by rendering more easy the purchase of raw materials and provisions, and the payment for manufactured supplies. A general circulation of bank paper, which is to be expected from the institution lately established, will be a most valuable mean to this end. But much good would also accrue from some additional provisions respecting inland bills of exchange. If those drawn in one State, payable in another, were made negotiable everywhere, and interest and damages allowed in case of protest, it would greatly promote negotiations between the citizens of different States, by rendering them more

secure, and with it the convenience and advantage of the merchants and manufacturers of each.

11. *The facilitating of the transportation of commodities.*

Improvements favoring this object intimately concern all the domestic interests of a community; but they may, without impropriety, be mentioned as having an important relation to manufactures. There is, perhaps, scarcely anything which has been better calculated to assist the manufacturers of Great Britain, than the melioration of the public roads of that kingdom, and the great progress which has been of late made in opening canals. Of the former, the United States stand much in need; for the latter, they present uncommon facilities.

The symptoms of attention to the improvement of inland navigation which have lately appeared in some quarters, must fill with pleasure every breast, warmed with a true zeal for the prosperity of the country. These examples, it is to be hoped, will stimulate the exertions of the Government and citizens of every State. There can certainly be no object more worthy of the cares of the local administrations; and it were to be wished that there was no doubt of the power of the National Government to lend its direct aid on a comprehensive plan. This is one of those improvements which could be prosecuted with more efficacy by the whole, than by any part or parts of the Union. There are cases in which the general interest will be in danger to be sacrificed to the collision of some supposed local interests. Jealousies, in matters of this kind, are as apt to exist, as they are apt to be erroneous.

The following remarks are sufficiently judicious and pertinent to deserve a literal quotation:

"Good roads, canals, and navigable rivers, by diminishing the expense of carriage, put the remote parts of a country more nearly upon a level with those in the neighborhood of the town. They are, upon that account, the greatest of all improvements. They encourage the cultivation of the remote, which must always be the most extensive circle of the country. They are advantageous to the town, by breaking down the monopoly of the country in its neighborhood. They are advantageous, even to that part of the country. Though they introduce some rival commodities into the old market, they open many new markets to its produce. Monopoly, besides, is a great enemy to good management, which can never be universally established, but in consequence of that free and universal competition, which forces everybody to have recourse to it for the sake of self-defence. It is not more than fifty years ago that some of the counties in the neighborhood of London petitioned the parliament against the extension of the turnpike roads into the remoter counties. Those remoter counties, they pretended, from the

cheapness of labor, would be able to sell their grass and corn cheaper in the London market than themselves, and they would thereby reduce their rents, and ruin their cultivation. Their rents, however, have risen, and their cultivation has been improved since that time."

Specimens of a spirit similar to that which governed the counties here spoken of, present themselves too frequently to the eye of an impartial observer, and render it a wish of patriotism, that the body in this country, in whose councils a local or partial spirit is at least likely to predominate, were at liberty to pursue and promote the general interest, in those instances in which there might be danger of the interference of such a spirit.

The foregoing are the principal of the means by which the growth of manufactures is ordinarily promoted. It is, however, not merely necessary that the measures of government, which have a direct view to manufactures, should be calculated to assist and protect them, but that those which only collaterally affect them in the general course of the administration, should be guarded from any peculiar tendency to injure them.

There are certain species of taxes, which are apt to be oppressive to different parts of the community, and, among other ill effects, have a very unfriendly aspect towards manufactures. All poll or capitation taxes are of this nature. They either proceed according to a fixed rate, which operates unequally and injuriously to the industrious poor, or they vest a discretion in certain officers to make estimates and assessments, which are necessarily vague, conjectural, and liable to abuse. They ought, therefore, to be abstained from in all but cases of distressing emergency.

All such taxes (including all taxes on occupations) which proceed according to the amount of capital supposed to be employed in a business, or of profits supposed to be made in it, are unavoidably hurtful to industry. It is in vain that the evil may be endeavored to be mitigated, by leaving it, in the first instance, in the option of the party to be taxed, to declare the amount of his capital or profits.

Men engaged in any trade or business, have commonly weighty reasons to avoid disclosures, which would expose, with any thing like accuracy, the real state of affairs. They most frequently find it better to risk oppression, than to avail themselves of so inconvenient a refuge, and the consequence is, that they often suffer oppression.

When the disclosure, too, if made, is not definitive, but controllable

by the discretion, or, in other words, by the passions and prejudices of the revenue officers, it is not only an ineffectual protection, but the possibility of its being so is an additional reason for not resorting to it.

Allowing to the public officers the most equitable dispositions, yet, where they are to exercise a discretion without certain data, they cannot fail to be often misled by appearances. The quantity of business which seems to be going on, is, in a vast number of cases, a very deceitful criterion of the profits which are made; yet it is, perhaps, the best they can have, and it is the one on which they will most naturally rely. A business, therefore, which may rather require aid from the Government than be in a capacity to be contributory to it, may find itself crushed by the mistaken conjectures of the assessors of taxes.

Arbitrary taxes, under which denomination are comprised all those that leave the quantum of the tax to be raised on each person to the discretion of certain officers, are as contrary to the genius of liberty as to the maxims of industry. In this light they have been viewed by the most judicious observers on Government, who have bestowed upon them the severest epithets of reprobation, as constituting one of the worst features usually to be met with in the practice of despotic governments.

It is certain, at least, that such taxes are particularly inimical to the success of manufacturing industry, and ought carefully to be avoided by a government which desires to promote it.

The great copiousness of the subject of this report has insensibly led to a more lengthy preliminary discussion than was originally contemplated or intended. It appeared proper to investigate principles, to consider objections, and to endeavor to establish the utility of the thing proposed to be encouraged, previous to a specification of the objects which might occur, as meriting or requiring encouragement, and of the measures which might be proper in respect to each. The first purpose having been fulfilled, it remains to pursue the second.

In the selection of objects, five circumstances seem entitled to particular attention. The capacity of the country to furnish the raw material; the degree in which the nature of the manufacture admits of a substitute for manual labor in machinery; the facility of execution; the extensiveness of the uses to which the article can be applied; its subserviency to other interests, particularly the great one of national defence. There are, however, objects to which these circumstances are

little applicable, which, for some special reasons, may have a claim to encouragement.

The foregoing heads [iron, copper, lead, fossil coal, wood, skins, grain, flax and hemp, cotton, wool, silk, glass, gunpowder, paper, printed books, refined sugars, and chocolate] comprise the most important of the several kinds of manufactures which have occurred as requiring, and, at the same time, as most proper for public encouragement; and such measures for affording it as have appeared best calculated to answer the end, have been suggested.

The observations which have accompanied this delineation of objects, supersede the necessity of many supplementary remarks. One or two, however, may not be altogether superfluous.

Bounties are, in various instances, proposed, as one species of encouragement.

It is a familiar objection to them, that they are difficult to be managed, and liable to frauds. But neither that difficulty nor this danger seems sufficiently great to countervail the advantages of which they are productive, when rightly applied. And it is presumed to have been shown, that they are, in some cases, particularly in the infancy of new enterprises, indispensable.

It will, however, be necessary to guard, with extraordinary circumspection, the manner of dispensing them. The requisite precautions have been thought of, but to enter into the detail, would swell this report, already voluminous, to a size too inconvenient.

If the principle shall not be deemed inadmissible, the means of avoiding an abuse of it will not be likely to present insurmountable obstacles. There are useful guides from practice in other quarters.

It shall, therefore, only be remarked here, in relation to this point, that any bounty which may be applied to the manufacture of an article, cannot, with safety, extend beyond those manufactories at which the making of the article is a regular trade. It would be impossible to annex adequate precautions to a benefit of that nature, if extended to every private family in which the manufacture was incidentally carried on; and its being a merely incidental occupation, which engages a portion of time that would otherwise be lost, it can be advantageously carried on without so special an aid.

The possibility of a diminution of the revenue may also present itself as an objection to the arrangements which have been submitted.

But there is no truth which may be more firmly relied upon, than that the interests of the revenue are promoted by whatever promotes an increase of national industry and wealth.

In proportion to the degree of these, is the capacity of every country to contribute to the public treasury; and where the capacity to pay is increased, or even is not decreased, the only consequence of measures which diminish any particular resource, is a change of the object. If, by encouraging the manufacture of an article at home, the revenue which has been wont to accrue from its importation should be lessened, an indemnification can easily be found, either out of the manufacture itself, or from some other object which may be deemed more convenient.

The measures, however, which have been submitted, taken aggregately, will, for a long time to come, rather augment than decrease the public revenue.

There is little room to hope, that the progress of manufactures will so equally keep pace with the progress of population, as to prevent even a gradual augmentation of the product of the duties on imported articles.

As, nevertheless, an abolition in some instances, and a reduction in others, of duties which have been pledged for the public debt, is proposed, it is essential that it should be accompanied with a competent substitute. In order to this, it is requisite that all the additional duties which shall be laid, be appropriated, in the first instance, to replace all defalcations which may proceed from any such abolition or diminution. It is evident, at first glance, that they will not only be adequate to this, but will yield a considerable surplus. This surplus will serve—

First. To constitute a fund for paying the bounties which shall have been decreed.

Secondly. To constitute a fund for the operations of a board to be established, for promoting arts, agriculture, manufactures, and commerce. Of this institution, different intimations have been given in the course of this report. An outline of a plan for it shall now be submitted.

Let a certain annual sum be set apart, and placed under the management of commissioners, not less than three, to consist of certain officers of the Government and their successors in office.

Let these commissioners be empowered to apply the fund confided to them, to defray the expenses of the emigration of artists, and manufacturers in particular branches of extraordinary importance; to induce

the prosecution and introduction of useful discoveries, inventions, and improvements, by proportionate rewards, judiciously held out and applied; to encourage by premiums, both honorable and lucrative, the exertions of individuals and of classes, in relation to the several objects they are charged with promoting; and to afford such other aids to those objects as may be generally designated by law.

The commissioners to render to the Legislature an annual account of their transactions and disbursements; and all such sums as shall not have been applied to the purposes of their trust, at the end of every three years, to revert to the treasury. It may, also, be enjoined upon them not to draw out the money but for the purpose of some specific disbursement.

It may, moreover, be of use to authorize them to receive voluntary contributions, making it their duty to apply them to the particular objects for which they may have been made, if any shall have been designated by the donors.

There is reason to believe that the progress of particular manufactures has been much retarded by the want of skilful workmen. And it often happens, that the capitals employed are not equal to the purposes of bringing from abroad workmen of a superior kind. Here, in cases worthy of it, the auxiliary agency of Government would, in all probability, be useful. There are also valuable workmen in every branch, who are prevented from emigrating, solely, by the want of means. Occasional aids to such persons, properly administered, might be a source of valuable acquisitions to the country.

The propriety of stimulating by rewards the invention and introduction of useful improvements is admitted without difficulty. But the success of attempts in this way must evidently depend much on the manner of conducting them. It is probable that the placing of the dispensation of those rewards under some proper discretionary direction, where they may be accompanied by collateral expedients, will serve to give them the surest efficacy. It seems impracticable to apportion, by general rules, specific compensations for discoveries of unknown and disproportionate utility.

The great use which may be made of a fund of this nature, to procure and import foreign improvements, is particularly obvious. Among these, the article of machines would form a most important item.

The operation and utility of premiums have been adverted to, together with the advantages which have resulted from their dispensation,

under the direction of certain public and private societies. Of this, some experience has been had, in the instance of the Pennsylvania Society for the promotion of manufactures and useful arts; but the funds of that association have been too contracted to produce more than a very small portion of the good to which the principles of it would have led. It may confidently be affirmed, that there is scarcely any thing which has been devised better calculated to excite a general spirit of improvement, than the institutions of this nature. They are truly invaluable.

In countries where there is great private wealth, much may be effected by the voluntary contributions of patriotic individuals; but in a community situated like that of the United States, the public purse must supply the deficiency of private resource. In what can it be so useful as in prompting and improving the efforts of industry?

All which is humbly submitted.

ALEXANDER HAMILTON,

Secretary of the Treasury.

THE IDEA OF STATE SOVEREIGNTY

WE HAVE told in other places how the Federalists had been led by the troublesomeness of French agents and by the virulence of the Republican press to pass the Alien and Sedition laws (1798). The first gave the president power to banish from the country any suspected foreigner; the second made any publication defamatory to the President or Congress punishable by fine and imprisonment. Both laws were probably unconstitutional and suited only to martial law.

The Republicans under Jefferson rose up against what they considered the growth of a national tyranny; and turned to the states for protection to the individual. At Jefferson's suggestion Madison drew up resolutions for the Virginia legislature declaring the right of states to interpose against unconstitutional law. About the same time Kentucky passed resolutions formulated in substance by Jefferson, declaring the right of any state to nullify an act of Congress considered unconstitutional.

The Kentucky resolutions are much more radical than those of Virginia. The latter, as insisted upon by Madison, always use "the States" in the plural: the effect of this would be that it would require three-fourths of the states to nullify an act.

The resolutions have had an immense influence on United States history. They introduced the idea that the Constitution was a compact, and from this grew the ideas of state sovereignty, state rights and secession. At the time, however, the New England States pronounced against the ideas of the resolutions and the other states took no action whatever.

The Alien and Sedition laws were so palpably unjust that the election of 1800 went against the Federalists, and the subsequent repeal of these laws put at rest for a time the question of sovereignty.

THE KENTUCKY RESOLUTIONS

Kentucky Legislature

In the House of Representatives, November 10*th*, 1798.

The House, according to the standing order of the day, resolved itself into a Committee of the Whole on the state of the Commonwealth. Mr. Caldwell in the chair,

And after some time spent therein the Speaker resumed the chair, and Mr. Caldwell reported that the committee had, according to order, had under consideration the Governor's Address, and had come to the following resolutions thereupon, which he delivered in at the clerk's table, where they were twice read and agreed to by the House.

I. Resolved, That the several states composing the United States of America are not united on the principle of unlimited submission to their General Government; but that by compact under the style and title of a Constitution for the United States and of amendments thereto, they constituted a General Government for special purposes, delegated to that Government certain definite powers, reserving each state to itself, the residuary mass of right to their own self-government; and that whensoever the General Government assumes undelegated powers, its acts are unauthoritative, void, and are of no force: That to this compact each state acceded as a state, and is an integral party, its co-states forming as to itself, the other party: That the Government created by this compact was not made the exclusive or final judge of the extent

of the powers delegated to itself; since that would have made its discretion, and not the constitution, the measure of its powers; but that, as in all other cases of compact among parties having no common judge, each party has an equal right to judge for itself, as well of infractions as of the mode and measure of redress.

II. Resolved, That the Constitution of the United States having delegated to Congress a power to punish treason, counterfeiting the securities and current coin of the United States, piracies and felonies committed on the high seas, and offenses against the laws of nations, and no other crimes whatever, and it being true as a general principle, and one of the amendments to the Constitution having also declared, "that the powers not delegated to the United States by the Constitution, nor prohibited by it to the states, are reserved to the states respectively, or to the people," therefore also the same act of Congress passed on the 14th day of July, 1798, and entitled "An act in addition to the act entitled an act for the punishment of certain crimes against the United States;" as also the act passed by them on the 27th of June, 1798, entitled "An act to punish frauds committed on the Bank of the United States" (and all other their acts which assume to create, define, or punish crimes other than those enumerated in the constitution), are altogether void and of no force, and that the power to create, define, and punish such other crimes is reserved, and of right appertains solely and exclusively to the respective states, each within its own territory.

III. Resolved, That it is true as a general principle, and is also expressly declared by one of the amendments to the Constitution that "the powers not delegated to the United States by the Constitution, nor prohibited by it to the states, are reserved to the states respectively or to the people;" and that no power over the freedom of religion, freedom of speech, or freedom of the press being delegated to the United States by the Constitution, nor prohibited by it to the states, all lawful powers respecting the same did of right remain, and were reserved to the states, or to the people: That thus was manifested their determination to retain to themselves the right of judging how far the licentiousness of speech and of the press may be abridged without lessening their useful freedom, and how far those abuses which cannot be separated from their use, should be tolerated, rather than the use be destroyed; and thus also they guarded against all abridgment by the United States of the freedom of religious opinions and exercises, and retained to themselves the right of protecting the same, as this state by a law

passed on the general demand of its citizens, had already protected them from all human restraint or interference; and that in addition to this general principle and express declaration, another and more special provision has been made by one of the amendments to the Constitution which expressly declares that "Congress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof, or abridging the freedom of speech, or of the press," thereby guarding in the same sentence, and under the same words, the freedom of religion, of speech, and of the press, insomuch, that whatever violates either, throws down the sanctuary which covers the others, and that libels, falsehoods, and defamation, equally with heresy and false religion, are withheld from the cognizance of federal tribunals. That therefore the act of the Congress of the United States passed on the 14th day of July, 1798, entitled "An act in addition to the act for the punishment of certain crimes against the United States," which does abridge the freedom of the press, is not law, but is altogether void and of no effect.

IV. Resolved, That alien friends are under the jurisdiction and protection of the laws of the state wherein they are; that no power over them has been delegated to the United States, nor prohibited to the individual states distinct from their power over citizens; and it being true as a general principle, and one of the amendments to the Constitution having also declared, that "the powers not delegated to the United States by the Constitution nor prohibited by it to the states are reserved to the states respectively or to the people," the act of the Congress of the United States passed on the 22d day of June, 1798, entitled "An act concerning aliens," which assumes power over alien friends not delegated by the Constitution, is not law, but is altogether void and of no force.

V. Resolved, That in addition to the general principle as well as the express declaration, that powers not delegated are reserved, another and more special provision inserted in the Constitution from abundant caution has declared, "that the migration or importation of such persons as any of the states now existing shall think proper to admit, shall not be prohibited by the Congress prior to the year 1808." That this Commonwealth does not admit the migration of alien friends described as the subject of the said act concerning aliens; that a provision against prohibiting their migration is a provision against all acts equivalent thereto, or it would be nugatory; that to remove them when

migrated is equivalent to a prohibition of their migration, and is therefore contrary to the said provision of the Constitution, and void.

VI. Resolved, That the imprisonment of a person under the protection of the laws of this Commonwealth on his failure to obey the simple order of the President to depart out of the United States, as is undertaken by the said act entitled "An act concerning aliens," is contrary to the Constitution, one amendment to which has provided that "no person shall be deprived of liberty without due process of law," and that another having provided "that in all criminal prosecutions the accused shall enjoy the right to a public trial by an impartial jury, to be informed of the nature and cause of the accusation, to be confronted with the witnesses against him, to have compulsory process for obtaining witnesses in his favour, and to have the assistance of counsel for his defense," the same act undertaking to authorize the President to remove a person out of the United States who is under the protection of the law, on his own suspicion, without accusation, without jury, without public trial, without confrontation of the witnesses against him, without having witnesses in his favour, without defense, without counsel, is contrary to these provisions also of the Constitution, is therefore not law, but utterly void and of no force.

That transferring the power of judging any person who is under the protection of the laws, from the courts to the President of the United States, as is undertaken by the same act concerning aliens, is against the article of the Constitution which provides that "the judicial power of the United States shall be vested in courts, the judges of which shall hold their offices during good behavior," and that the said act is void for that reason also; and it is further to be noted, that this transfer of judiciary power is to that magistrate of the General Government who already possesses all the executive, and a qualified negative in all the legislative powers.

VII. Resolved, That the construction applied by the General Government (as is evinced by sundry of their proceedings) to those parts of the Constitution of the United States which delegate to Congress a power to lay and collect taxes, duties, imposts and excises; to pay the debts, and provide for the common defense, and general welfare of the United States, and to make all laws which shall be necessary and proper for carrying into execution the powers vested by the Constitution in the Government of the United States, or any department thereof, goes to the destruction of all the limits prescribed to their

power by the Constitution—that words meant by that instrument to be subsidiary only to the execution of the limited powers, ought not to be so construed as themselves to give unlimited powers, nor a part so to be taken, as to destroy the whole residue of the instrument: That the proceedings of the General Government under colour of these articles, will be a fit and necessary subject for revisal and correction at a time of greater tranquility, while those specified in the preceding resolutions call for immediate redress.

VIII. Resolved, That the preceding resolutions be transmitted to the senators and representatives in Congress from this Commonwealth, who are hereby enjoined to present the same to their respective Houses, and to use the best endeavours to procure at the next session of Congress, a repeal of the aforesaid unconstitutional and obnoxious acts.

IX. Resolved, lastly, That the Governor of this Commonwealth be, and is hereby authorized and requested to communicate the preceding resolutions to the legislatures of the different states, to assure them that this Commonwealth considers Union for specified national purposes, and particularly for those specified in their late Federal compact, to be friendly to the peace, happiness and prosperity of all the states: that faithful to that compact, according to the plain intent and meaning in which it was understood and acceded to by the several parties, it is sincerely anxious for its preservation: that it does also believe, that to take from the states all the powers of self-government, and transfer them to a general and consolidated government, without regard to the special delegations and reservations solemnly agreed to in that compact, is not for the peace, happiness, or prosperity of these states: And that therefore this Commonwealth is determined, as it doubts not its co-states are, tamely to submit to undelegated and consequently unlimited powers in no man or body of men on earth: that if the acts before specified should stand, these conclusions would flow from them; that the General Government may place any act they think proper on the list of crimes and punish it themselves, whether enumerated or not enumerated by the Constitution as cognizable by them: that they may transfer its cognizance to the President or any other person, who may himself be the accuser, counsel, judge, and jury, whose suspicions may be the evidence, his order the sentence, his officer the executioner, and his breast the sole record of the transaction: that a very numerous and valuable description of the inhabitants of these states, being by this precedent reduced as outlaws to

the absolute dominion of one man and the barrier of the Constitution thus swept away from us all, no rampart now remains against the passions and the power of a majority of Congress, to protect from a like exportation or other more grievous punishment the minority of the same body, the legislatures, judges, governors and counselors of the states, nor their other peaceable inhabitants who may venture to reclaim the constitutional rights and liberties of the states and people, or who for other causes, good or bad, may be obnoxious to the views or marked by the suspicions of the President, or be thought dangerous to his or their elections or other interests public or personal: that the friendless alien has indeed been selected as the safest subject of a first experiment: but the citizen will soon follow, or rather has already followed; for already has a Sedition Act marked him as its prey: that these and successive acts of the same character, unless arrested on the threshold, may tend to drive these states into revolution and blood, and will furnish new calumnies against republican governments, and new pretexts for those who wish it to be believed that man cannot be governed but by a rod of iron: that it would be a dangerous delusion were a confidence in the men of our choice to silence our fears for the safety of our rights: that confidence is everywhere the parent of despotism: free government is founded in jealousy and not in confidence; it is jealousy and not confidence which prescribes limited constitutions to bind down those whom we are obliged to trust with power; that our Constitution has accordingly fixed the limits to which and no further our confidence may go; and let the honest advocate of confidence read the alien and sedition acts, and say if the Constitution has not been wise in fixing limits to the government it created, and whether we should be wise in destroying those limits? Let him say what the government is if it be not a tyranny, which the men of our choice have conferred on the President, and the President of our choice has assented to and accepted over the friendly strangers, to whom the mild spirit of our country and its laws had pledged hospitality and protection: that the men of our choice have more respected the bare suspicions of the President than the solid rights of innocence, the claims of justification, the sacred force of truth, and the forms and subsistence of law and justice. In questions of power then let no more be heard of confidence in man, but bind him down from mischief by the chains of the Constitution. That this Commonwealth does therefore call on its co-states for an expression of their sentiments on the acts concern-

ing aliens, and for the punishment of certain crimes hereinbefore specified, plainly declaring whether these acts are or are not authorized by the federal compact? And it doubts not that their sense will be so announced as to prove their attachment unaltered to limited government, whether general or particular, and that the rights and liberties of their co-states will be exposed to no dangers by remaining embarked on a common bottom with their own. That they will concur with this Commonwealth in considering the said acts so palpably against the Constitution as to amount to an undisguised declaration that the compact is not meant to be the measure of the powers of the General Government, but that it will proceed in the exercise over these states of all powers whatsoever: That they will view this as seizing the rights of the states and consolidating them in the hands of the General Government with a power assumed to bind the states (not merely in cases made federal), but in all cases whatsoever, by laws made, not with their consent, but by others against their consent: That this would be to surrender the form of government we have chosen, and to live under one deriving its powers from its own will, and not from our authority; and that the co-states recurring to their natural right in cases not made federal, will concur in declaring these acts void and of no force, and will each unite with this Commonwealth in requesting their repeal at the next session of Congress.

EDMUND BULLOCK, S. H. R.
JOHN CAMPBELL, S. S. P. T.

Passed the House of Representatives, Nov. 10th, 1798.
Attest: THOMAS TODD, C. H. R.

In Senate, Nov. 13th, 1798, unanimously concurred in.
Attest: B. THURSTON, Clerk Senate.

Approved, Nov. 16th, 1798.

JAMES GARRARD, G. K.

By the Governor, HARRY TOULMIN,
Secretary of State.

THE VIRGINIA RESOLUTIONS

VIRGINIA to-wit:

In the House of Delegates, Friday, December 21st, 1798.

Resolved, That the General Assembly of Virginia doth unequiv-

ocally express a firm resolution to maintain and defend the Constitution of the United States, and the Constitution of this state against every aggression, either foreign or domestic, and that they will support the Government of the United States in all measures warranted by the former.

That this Assembly most solemnly declares a warm attachment to the union of the states, to maintain which it pledges all its powers; and that for this end it is their duty to watch over and oppose every infraction of those principles which constitute the only basis of that union, because a faithful observance of them can alone secure its existence, and the public happiness.

That this Assembly doth explicitly and peremptorily declare that it views the powers of the Federal Government, as resulting from the compact, to which the states are parties; as limited by the plain sense and intention of the instrument constituting that compact; as no farther valid than they are authorized by the grants enumerated in that compact, and that in case of a deliberate, palpable and dangerous exercise of other powers not granted by the said compact, the states who are parties thereto have the right, and are in duty bound to interpose for arresting the progress of the evil, and for maintaining within their respective limits the authorities, rights and liberties appertaining to them.

That the General Assembly doth also express its deep regret that a spirit has in sundry instances been manifested by the Federal Government to enlarge its powers by forced constructions of the constitutional charter which defines them; and that indications have appeared of a design to expound certain general phrases (which having been copied from the very limited grant of powers in the former articles of confederation, were the less liable to be misconstrued), so as to destroy the meaning and effect of the particular enumeration, which necessarily explains and limits the general phrases; and so as to consolidate the states by degrees into one sovereignty, the obvious tendency and inevitable consequence of which would be to transform the present republican system of the United States into an absolute, or at best a mixed monarchy.

That the General Assembly doth particularly protest against the palpable and alarming infractions of the Constitution, in the two late cases of the "alien and sedition acts," passed at the last session of Congress, the first of which exercises a power nowhere delegated to the

Federal Government; and which by uniting legislative and judicial powers to those of executive, subverts the general principles of free government, as well as the particular organization and positive provisions of the Federal Constitution; and the other of which acts, exercises in like manner a power not delegated by the Constitution, but on the contrary, expressly and positively forbidden by one of the amendments thereto; a power which more than any other ought to produce universal alarm, because it is leveled against the right of freely examining public characters and measures, and of free communication among the people thereon, which has ever been justly deemed the only effectual guardian of every other right.

That this state having by its convention which ratified the Federal Constitution, expressly declared "that among other essential rights, the liberty of conscience and of the press cannot be canceled, abridged, restrained or modified by any authority of the United States," and from its extreme anxiety to guard these rights from every possible attack of sophistry or ambition, having with other states recommended an amendment for that purpose, which amendment was in due time annexed to the Constitution, it would mark a reproachful inconsistency and criminal degeneracy if an indifference were now shown to the most palpable violation of one of the rights thus declared and secured, and to the establishment of a precedent which may be fatal to the other.

That the good people of this Commonwealth having ever felt and continuing to feel the most sincere affection to their brethren of the other states, the truest anxiety for establishing and perpetuating the union of all, and the most scrupulous fidelity to that Constitution which is the pledge of mutual friendship, and the instrument of mutual happiness: The General Assembly doth solemnly appeal to the like dispositions of the other states, in confidence that they will concur with this Commonwealth in declaring, as it does hereby declare, that the acts aforesaid are unconstitutional, and that the necessary and proper measures will be taken by each for co-operating with this state, in maintaining unimpaired the authorities, rights, and liberties, reserved to the states respectively, or to the people.

That the Governor be desired to transmit a copy of the foregoing resolutions to the executive authority of each of the other states, with a request that the same may be communicated to the legislature thereof.

And that a copy be furnished to each of the senators and repre-

sentatives, representing this state in the Congress of the United States.

Attest: JOHN STUART, C. H. D.

1798, December the 24th,

Agreed to by the Senate,

H. BROOKE, C. S.

KENTUCKY RESOLUTIONS OF 1799

HOUSE OF REPRESENTATIVES, *Thursday, Nov.* 14, 1799.

The House, according to the standing order of the day, resolved itself into a committee of the whole house, on the state of the Commonwealth (Mr. Desha in the chair), and, after some time spent therein, the Speaker resumed the chair, and Mr. Desha reported that the committee had taken under consideration sundry resolutions passed by several state legislatures, on the subject of the alien and sedition laws, and had come to a resolution thereupon, which he delivered in at the clerk's table, where it was read and unanimously agreed to by the House, as follows:—

The representatives of the good people of this Commonwealth, in General Assembly convened, having maturely considered the answers of sundry states in the Union to their resolutions, passed the last session, respecting certain unconstitutional laws of Congress, commonly called the alien and sedition laws, would be faithless, indeed, to themselves and to those they represent, were they silently to acquiesce in the principles and doctrines attempted to be maintained in all those answers, that of Virginia only excepted. To again enter the field of argument and attempt more fully or forcibly to expose the unconstitutionality of those obnoxious laws, would, it is apprehended, be as unnecessary as unavailing. We cannot, however, but lament that, in the discussion of those interesting subjects by sundry of the legislatures of our sister states, unfounded suggestions and uncandid insinuations, derogatory to the true character and principles of this Commonwealth, have been substituted in place of fair reasoning and sound argument. Our opinions of these alarming measures of the General Government, together with our reasons for those opinions, were detailed with decency and temper, and submitted to the discussion and judgment of our fellow-citizens throughout the Union. Whether the like decency and temper have been observed in the an-

swers of most of those states who have denied, or attempted to obviate, the great truths contained in those resolutions, we have now only to submit to a candid world.

Faithful to the true principles of the Federal Union, unconscious of any designs to disturb the harmony of that Union, and anxious only to escape the fangs of despotism, the good people of this Commonwealth are regardless of censure or calumniation. Lest, however, the silence of this Commonwealth be construed into an acquiescence in the doctrines and principles advanced, and attempted to be maintained, by the said answers: or at least those of our fellow-citizens throughout the Union who so widely differ from us on those important subjects, should be deluded by the expectation that we shall be deterred from what we conceive our duty, or shrink from the principles contained in those resolutions, therefore,

Resolved, That this Commonwealth considers the Federal Union, upon the terms and for the purposes specified in the late compact, conducive to the liberty and happiness of the several states: That it does now unequivocally declare its attachment to the Union, and to that compact, agreeably to its obvious and real intention, and will be among the last to seek its dissolution: That, if those who administer the General Government be permitted to transgress the limits fixed by that compact, by a total disregard to the special delegations of power therein contained, an annihilation of the state governments, and the creation, upon their ruins, of a general consolidated government, will be the inevitable consequence: That the principle and construction, contended for by sundry of the state legislatures, that the General Government is the exclusive judge of the extent of the powers delegated to it, stop not short of despotism—since the discretion of those who administer the government, and not the Constitution, would be the measure of their powers: That the several states who formed that instrument, being sovereign and independent, have the unquestionable right to judge of the infraction; and that a nullification, by those sovereignties, of all unauthorized acts done under color of that instrument, is the rightful remedy: That this Commonwealth does, under the most deliberate consideration, declare that the said alien and sedition laws are, in their opinion, palpable violations of the said Constitution; and, however cheerfully it may be disposed to surrender its opinion to a majority of its sister states, in matters of ordinary or doubtful policy, yet, in momentous regulations like the present, which so vitally wound the best

rights of the citizen, it would consider a silent acquiescence as highly criminal: That, although this Commonwealth, as a party to the federal compact, will bow to the laws of the Union, yet it does, at the same time, declare that it will not now, or ever hereafter, cease to oppose, in a constitutional manner, every attempt, at what quarter soever offered, to violate that compact. And finally, in order that no pretext or arguments may be drawn from a supposed acquiescence, on the part of this Commonwealth, in the constitutionality of those laws, and be thereby used as precedents for similar future violations of the federal compact, this commonwealth does now enter against them its solemn protest.

Extract, etc. Attest: THOMAS TODD, C. H. R.

In Senate, Nov. 22, 1799. Read and concurred in.

Attest: B. THURSTON, C. S.

—Elliott's Debates, Vol. IV., pp. 544-545.

EXPANSION

BY THE TREATY of Paris (1763) France had given Louisiana, consisting of the present states of Louisiana, Arkansas, most of Oklahoma and the territory from the Rockies to the Mississippi north of the Arkansas river, to Spain. When Napoleon became all-powerful on the Continent he wanted to use Louisiana as territory for colonization and got Spain to cede it back to France. Rumors of the treaty reached America in 1801. Jefferson did not wish France to take possession and at once sent Monroe to France to act with Robert R. Livingston, the United States minister, to purchase, if possible, New Orleans and the Floridas. In the meantime Napoleon saw war with England at hand and knew that the French fleet could not protect Louisiana against the British. Napoleon immediately decided to sell the whole province, whether the chambers would consent to it or not. The sum originally demanded was fixed at 80,000,000 francs, plus 20,000,000, with which the United States should pay claims due from France to American citizens. The price finally agreed upon was 60,000,000 francs and an additional 20,000,000 to pay such claims.

The purchase of Louisiana raised considerable opposition in the East, because it would throw the balance of power westward. These

objections will be seen in the speech of Josiah Quincy included later in this volume.

It is one of the peculiar facts of history that this act done by a strict construction, State sovereignty party, has so extended the Union that today each individual state has little more than local importance in comparison with the whole.

In 1819 Spain's hands were more than busy with the revolt of the Spanish-American colonies and Florida was left practically to govern itself. The Seminole Indians got beyond the Spanish control and harassed the citizens of Georgia across the line. Andrew Jackson, with characteristic promptness and a like disregard of fine questions of international right, marched into Florida and virtually took control of the country. Spain could do nothing but sell to the United States.

Both the Louisiana and Florida treaties contained clauses insuring the rights of citizens to local residents. There was much question of the right of Congress thus to purchase new territory, but the Supreme Court in 1819 decided its acts toward Florida constitutional.

TREATY AND CONVENTIONS BETWEEN THE UNITED STATES AND THE FRENCH REPUBLIC

"Treaty between the French Republic and the United States, concerning the Cession of Louisiana, signed at Paris the 30th of April, 1803

"THE President of the United States of America and the First Consul of the French Republic, in the name of the French people, desiring to remove all source of misunderstanding relative to objects of discussion, mentioned in the second and fifth articles of the convention of the 8th Vendemiaire, an. 9 (30th of September, 1800,), relative to the rights claimed by the United States, in virtue of the treaty concluded at Madrid the 27th of October, 1795, between his Catholic Majesty and the said United States, and willing to strengthen the union and friendship which at the time of the said convention was happily re-established between the two nations, have respectively named their plenipotentiaries, to-wit, the President of the United States of America, by and with the advice and consent of the Senate of the said States, Robert R. Livingston, Minister Plenipotentiary of the United States, and James Monroe, Minister Plenipotentiary and Envoy Extraordinary of the said States, near the government of the French Republic; and the First Consul, in the name of the French people, the French citizen, Barbé

Marbois, Minister of the Public Treasury, who, after having respectively exchanged their full powers, have agreed to the following articles:—

"ART. 1st. Whereas, by the article the third of the treaty concluded at St. Ildephonso, the 9th Vendemiaire, an. 9 (1st October, 1800,), between the First Consul of the French Republic and his Catholic Majesty, it was agreed as follows: 'His Catholic Majesty promises and engages, on his part, to retrocede to the French Republic, six months after the full and entire execution of the conditions and stipulations herein relative to his Royal Highness the Duke of Parma, the colony or province of Louisiana, with the same extent that it now has in the hands of Spain, and that it had when France possessed it; and such as it should be after the treaties subsequently entered into between Spain and other States.' And, whereas, in pursuance of the treaty, and particularly of the third article, the French Republic has an incontestable title to the domain, and to the possession of the said territory: The First Consul of the French Republic, desiring to give to the United States a strong proof of his friendship, doth hereby cede to the said United States, in the name of the French Republic, forever and in full sovereignty, the said territory, with all its rights and appurtenances, as fully and in the same manner as they had been acquired by the French Republic in virtue of the above mentioned treaty concluded with his Catholic Majesty.

"ART. 2d. In the cession made by the preceding article are included the adjacent islands belonging to Louisiana, all public lots and squares, vacant lands, and all public buildings, fortifications, barracks and other edifices which are not private property. The archives, papers and documents, relative to the domain and sovereignty of Louisiana and its dependencies, will be left in the possession of the commissaries of the United States, and copies will be afterwards given in due form to the magistrates and municipal officers of such of the said papers and documents as may be necessary to them.

"ART. 3d. The inhabitants of the ceded territory shall be incorporated into the Union of the United States, and admitted as soon as possible, according to the principles of the Federal Constitution, to the enjoyment of all the rights, advantages and immunities of citizens of the United States; and in the meantime they shall be maintained and protected in the free enjoyment of their liberty, property, and the religion which they profess.

"ART. 4th. There shall be sent by the government of France a Commissary to Louisiana, to the end that he do every act necessary, as well to receive from the officers of his Catholic Majesty the said country and

its dependencies, in the name of the French Republic, if it has not been already done, as to transmit it in the name of the French Republic to the commissary or agent of the United States.

"ART. 5th. Immediately after the ratification of the present treaty by the President of the United States, and in case that of the First Consul shall have been previously obtained, the Commissary of the French Republic shall remit all the military posts of New Orleans and other parts of the ceded territory, to the commissary or commissaries named by the President to take possession; the troops, whether of France or Spain, who may be there, shall cease to occupy any military post from the time of taking possession, and shall be embarked as soon as possible, in the course of three months after the ratification of this treaty.

"ART. 6th. The United States promise to execute such treaties and articles as may have been agreed between Spain and the tribes and nations of Indians, until, by mutual consent of the United States and the said tribes or nations, other suitable articles shall have been agreed upon.

"ART. 7th. As it is reciprocally advantageous to the commerce of France and the United States to encourage the communication of both nations for a limited time in the country ceded by the present treaty, until general arrangements relative to the commerce of both nations may be agreed upon, it has been agreed between the contracting parties, that the French ships coming directly from France or any of her colonies, loaded only with the produce or manufactures of France or her said colonies; and the ships of Spain coming directly from Spain or any of her colonies, loaded only with the produce or manufactures of Spain or her colonies, shall be admitted during the space of twelve years in the port of New Orleans, and in all other legal ports of entry within the ceded territory, in the same manner as the ships of the United States coming directly from France or Spain or any of their colonies, without being subject to any other or greater duty on merchandise, or other or greater tonnage than those paid by the citizens of the United States.

"During the space of time above mentioned, no other nation shall have a right to the same privileges in the ports of the ceded territory: the twelve years shall commence three months after the exchange of ratifications, if it shall take place in France, or three months after it shall have been notified at Paris to the French government, if it shall take place in the United States: it is, however, well understood that the object of the above article is to favor the manufactures, commerce, freight, and navigation of France and of Spain, so far as relates to the

importations that the French and Spanish shall make into the said ports of the United States, without in any sort affecting the regulations that the United States may make concerning the exportation of the produce and merchandise of the United States, or any right they may have to make such regulations.

"ART. 8th. In future, and forever after the expiration of the twelve years, the ships of France shall be treated upon the footing of the most favored nations in the ports above mentioned.

"ART. 9th. The particular convention, signed this day by the respective Ministers, having for its object to provide for the payment of debts due to the citizens of the United States by the French Republic, prior to the 30th of September, 1800, (8th Vendemiaire, an. 9), is approved, and to have its execution in the same manner as if it had been inserted in the present treaty; and it shall be ratified in the same form, and in the same time, so that the one shall not be ratified distinct from the other.

"Another particular convention, signed at the same date as the present treaty, relative to the definitive rule betwen the contracting parties, is in the like manner approved, and will be ratified in the same form, and in the same time, and jointly.

"ART. 10th. The present treaty shall be ratified in good and due form, and the ratifications shall be exchanged in the space of six months after the date of the signature by the Ministers Plenipotentiary, or sooner if possible.

"In faith whereof, the respective Plenipotentiaries have signed these articles in the French and English languages; declaring, nevertheless, that the present treaty was originally agreed to in the French language; and have thereunto put their seals.

"Done at Paris, the tenth day of Floreal, in the eleventh year of the French Republic, and the 30th of April, 1803.

"ROBERT R. LIVINGSTON,
"JAMES MONROE,
"BARBE MARBOIS."

JEFFERSON ON THE LOUISIANA PURCHASE

TO MR. BRECKENRIDGE

MONTICELLO, August 12, 1803.

DEAR SIR: The enclosed letter, though directed to you, was intended to me also, and was left open with a request, that when for-

warded, I would forward it to you. It gives me occasion to write a word to you on the subject of Louisiana, which being a new one, an interchange of sentiments may produce correct ideas before we are to act on them.

Our information as to the country is very incomplete; we have taken measures to obtain it full as to the settled part, which I hope to receive in time for Congress. The boundaries, which I deem not admitting question, are the highlands on the western side of the Mississippi, enclosing all its waters, the Missouri of course, and terminating in the line drawn from the northwestern point of the Lake of the Woods to the nearest source of the Mississippi, as lately settled between Great Britain and the United States. We have some claims, to extend on the seacoast westwardly to the Rio Norte or Bravo, and better, to go eastwardly to the Rio Perdido, between Mobile and Pensacola, the ancient boundary of Louisiana. These claims will be a subject of negotiation with Spain, and if, as soon as she is at war, we push them strongly with one hand, holding out a price in the other, we shall certainly obtain the Floridas, and all in good time. In the meanwhile, without waiting for permission, we shall enter into the exercise of the natural right we have always insisted on with Spain, to-wit, that of a nation holding the upper part of streams, having a right of innocent passage through them to the ocean. We shall prepare her to see us practice this, and she will not oppose it by force.

Objections are raising to the eastward against the vast extent of our boundaries, and propositions are made to exchange Louisiana, or a part of it, for the Floridas. But, as I have said, we shall get the Floridas without, and I would not give one inch of the waters of the Mississippi to any nation, because I see in a light very important to our peace the exclusive right to its navigation, and the admission of no nation into it, but as into the Potomac or Delaware, with our consent and under our police. These federalists see in this acquisition the formation of a new confederacy, embracing all the waters of the Mississippi, on both sides of it, and a separation of its eastern waters from us. These combinations depend on so many circumstances which we cannot foresee, that I place little reliance on them. We have seldom seen neighborhood produce affection among nations. The reverse is almost the universal truth. Besides, if it should become the great interest of those nations to separate from this, if their happiness should depend on it so strongly as to induce them to go through that convulsion,

why should the Atlantic States dread it? But especially why should we, their present inhabitants, take side in such a question? When I view the Atlantic States, procuring for those on the eastern waters of the Mississippi friendly instead of hostile neighbors on its western waters, I do not view it as an Englishman would the procuring future blessings for the French nation, with whom he has no relations of blood or affection. The future inhabitants of the Atlantic and Mississippi States will be our sons. We leave them in distinct but bordering establishments. We think we see their happiness in their union, and we wish it. Events may prove it otherwise; and if they see their interest in separation, why should we take side with our Atlantic rather than our Mississippi descendants? It is the elder and the younger son differing. God bless them both, and keep them in union, if it be for their good, but separate them, if it be better. The inhabited part of Louisiana, from Point Coupée to the sea, will of course be immediately a territorial government, and soon a State. But above that, the best use we can make of the country for some time, will be to give establishments in it to the Indians on the east side of the Mississippi, in exchange for their present country, and open land offices in the last, and thus make this acquisition the means of filling up the eastern side, instead of drawing off its population. When we shall be full on this side, we may lay off a range of States on the western bank from the head to the mouth, and so, range after range, advancing compactly as we multiply.

This treaty must of course be laid before both Houses, because both have important functions to exercise respecting it. They, I presume, will see their duty to their country in ratifying and paying for it, so as to secure a good which would otherwise probably be never again in their power. But I suppose they must then appeal to the nation for an additional article to the Constitution, approving and confirming an act which the nation had not previously authorized. The Constitution has made no provision for our holding foreign territory, still less for incorporating foreign nations into our Union. The executive in seizing the fugitive occurrence which so much advances the good of their country have done an act beyond the Constitution. The Legislature in casting behind them metaphysical subtleties, and risking themselves like faithful servants, must ratify and pay for it, and throw themselves on their country for doing for them unauthorized, what we know they would have done for themselves had they been in a situation to do it. It is the case of a guardian, investing the money of his ward in purchasing

an important adjacent territory; and saying to him when of age, I did this for your good; I pretend to no right to bind you: you may disavow me, and I must get out of the scrape as I can: I thought it my duty to risk myself for you. But we shall not be disavowed by the nation, and their act of indemnity will confirm and not weaken the Constitution, by more strongly marking out its lines.

We have nothing later from Europe than the public papers give. I hope yourself and all the western members will make a sacred point of being at the first day of the meeting of Congress; for *vestra res regitur.*

Accept my affectionate salutations and assurances of esteem and respect.

To Levi Lincoln

Monticello, August 30, 1803.

Dear Sir:—The enclosed letter came to hand by yesterday's post. You will be sensible of the circumstances which make it improper that I should hazard a formal answer, as well as of the desire its friendly aspect naturally excites, that those concerned in it should understand that the spirit they express is friendly viewed. You can judge also from your knowledge of the ground whether it may be usefully encouraged. I take the liberty, therefore, of availing myself of your neighborhood to Boston, and of your friendship to me, to request you to say to the captain and others verbally whatever you think would be proper, as expressive of my sentiments on the subject. With respect to the day on which they wish to fix their anniversary, they may be told, that disapproving myself of transferring the honors and veneration for the great birthday of our republic to any individual, or of dividing them with individuals, I have declined letting my own birthday be known, and have engaged my family not to communicate it. This has been the uniform answer to every application of the kind.

On further consideration as to the amendment to our Constitution respecting Louisiana, I have thought it better, instead of enumerating the powers which Congress may exercise, to give them the same powers they have as to other portions of the Union generally, and to enumerate the special exceptions, in some such form as the following:

"Louisiana, as ceded by France to the United States, is made a part of the United States, its white inhabitants shall be citizens, and stand, as to their rights and obligations, on the same footing with other citizens of the United States in analogous situations. Save only that as to

the portion thereof lying north of an east and west line drawn through the mouth of the Arkansas river, no new State shall be established, nor any grants of land made, other than to Indians, in exchange for equivalent portions of land occupied by them, until an amendment to the Constitution shall be made for these purposes.

"Florida also, whensoever it may be rightfully obtained, shall become a part of the United States, its white inhabitants shall thereupon be citizens, and shall stand, as to their rights and obligations, on the same footing with other citizens of the United States, in analogous situations."

I quote this for your consideration, observing that the less that is said about any constitutional difficulty, the better; and that it will be desirable for Congress to do what is necessary, in silence. I find but one opinion as to the necessity of shutting up the country for some time. We meet in Washington the 25th of September to prepare for Congress. Accept my affectionate salutations, and great esteem and respect.

To Wilson C. Nicholas

Monticello, September 7, 1803.

Dear Sir:—Your favor of the 3d was delivered to me at court; but we were much disappointed at not seeing you here, Mr. Madison and the Governor being here at the time. I enclose you a letter from Monroe on the subject of the late treaty. You will observe a hint in it, to do without delay what we are bound to do. There is reason, in the opinion of our ministers, to believe, that if the thing were to do over again, it could not be obtained, and that if we give the least opening, they will declare the treaty void. A warning amounting to that has been given to them, and an unusual kind of letter written by their minister to our Secretary of State, direct. Whatever Congress shall think it necessary to do, should be done with as little debate as possible, and particularly so far as respects the constitutional difficulty. I am aware of the force of the observations you make on the power given by the Constitution to Congress, to admit new States into the Union, without restraining the subject to the territory then constituting the United States. But when I consider that the limits of the United States are precisely fixed by the treaty of 1783, that the Constitution expressly declares itself to be made for the United States, I cannot help believing the intention was not to permit Congress to admit into the Union new States, which should be formed out of the territory for which, and

under whose authority alone, they were then acting. I do not believe it was meant that they might receive England, Ireland, Holland, etc., into it, which would be the case on your construction. When an instrument admits two constructions, the one safe, the other dangerous, the one precise, the other indefinite, I prefer that which is safe and precise. I had rather ask an enlargement of power from the nation, where it is found necessary, than to assume it by a construction which would make our powers boundless. Our peculiar security is in the possession of a written Constitution. Let us not make it a blank paper by construction. I say the same as to the opinion of those who consider the grant of the treaty-making power as boundless. If it is, then we have no Constitution. If it has bounds, they can be no others than the definitions of the powers which that instrument gives. It specifies and delineates the operations permitted to the federal government, and gives all the powers necessary to carry these into execution. Whatever of these enumerated objects is proper for a law, Congress may make the law; whatever is proper to be executed by way of a treaty, the President and Senate may enter into the treaty; whatever is to be done by a judicial sentence, the judges may pass the sentence. Nothing is more likely than that their enumeration of powers is defective. This is the ordinary case of all human works. Let us go on, then, perfecting it, by adding, by way of amendment to the Constitution, those powers which time and trial show are still wanting. But it has been taken too much for granted, that by this rigorous construction the treaty power would be reduced to nothing. I had occasion once to examine its effect on the French treaty, made by the old Congress, and found that out of the thirty odd articles which that contained, there were one, two, or three only which could not now be stipulated under our present Constitution. I confess, then, I think it important, in the present case, to set an example against broad construction, by appealing for new power to the people. If, however, our friends shall think differently, certainly I shall acquiesce with satisfaction; confiding, that the good sense of our country will correct the evil of construction when it shall produce ill effects.

No apologies for writing or speaking to me freely are necessary. On the contrary, nothing my friends can do is so dear to me, and proves to me their friendship so clearly, as the information they give me of their sentiments and those of others on interesting points where I am to act, and where information and warning is so essential to excite in me that due reflection which ought to precede action. I leave this about

the 21st, and shall hope the District Court will give me an opportunity of seeing you.

Accept my affectionate salutations, and assurances of cordial esteem and respect.

MARSHALL ON THE CONSTITUTIONALITY OF EXPANSION

American Insurance Company and others *v.* Canter. January Term, 1828.

The American Insurance Company insured certain bales of cotton from New Orleans to France. The vessel in which it was shipped was wrecked on the coast of Florida, but the cotton was saved, and sold in order to pay the claim of those who saved it. This sale was made under the order of a territorial court of Florida. The owners having abandoned to the Insurance Company, the Company claimed part of the cotton which went to Charleston, and commenced suit for it in the United States district court, and obtained a judgment in their favor. Canter, who had bought at the sale in Florida, appealed to the circuit court, which reversed the decree of the district court; whereupon the Insurance Company appealed to the supreme court, the opinion of which was delivered by Chief Justice Marshall, as follows:

The plaintiffs filed their libel in this cause in the district court of South Carolina, to obtain restitution of three hundred and fifty-six bales of cotton, part of the cargo of the ship Point à Petre, which had been insured by them on a voyage from New Orleans to Havre de Grace, in France. The Point à Petre was wrecked on the coast of Florida, the cargo saved by the inhabitants, and carried into Key West, where it was sold for the purpose of satisfying the salvors, by virtue of a decree of a court, consisting of a notary and five jurors, which was erected by an act of the territorial legislature of Florida. The owners abandoned to the underwriters, who, having accepted the same, proceeded against the property; alleging that the sale was not made by order of a court competent to change the property.

David Canter claimed the cotton as a *bona fide* purchaser, under the decree of a competent court, which awarded seventy-six per cent. to the salvors on the value of the property saved.

The district judge pronounced the decree of the territorial court a nullity, and awarded restitution to the libellants of such part of the

cargo as he supposed to be identified by the evidence; deducting therefrom a salvage of fifty per cent.

The libellants and claimant both appealed. The circuit court reversed the decree of the district court, and decreed the whole cotton to the claimant with costs, on the ground that the proceedings of the court at Key West were legal, and transferred the property to the purchaser.

From this decree the libellants have appealed to this court.

The cause depends, mainly, on the question, whether the property in the cargo saved was changed by the sale at Key West. The conformity of that sale to the order under which it was made has not been controverted. Its validity has been denied, on the ground that it was ordered by an incompetent tribunal.

The tribunal was constituted by an act of the territorial legislature of Florida, passed on the 4th July, 1823, which is inserted in the record. That act purports to give the power which has been exercised; consequently, the sale is valid, if the territorial legislature was competent to enact the law.

The course which the argument has taken will require, that, in deciding this question, the court should take into view the relation in which Florida stands to the United States.

The constitution confers absolutely on the government of the union the powers of making war, and of making treaties; consequently, that government possesses the power of acquiring territory, either by conquest or by treaty.

The usage of the world is, if a nation be not entirely subdued, to consider the holding of conquered territory as a mere military occupation, until its fate shall be determined at the treaty of peace. If it be ceded by the treaty, the acquisition is confirmed, and the ceded territory becomes a part of the nation to which it is annexed; either on the terms stipulated in the treaty of cession, or on such as its new master shall impose. On such transfer of territory, it has never been held that the relations of the inhabitants with each other undergo any change. Their relations with their former sovereign are dissolved, and new relations are created between them and the government which has acquired their territory. The same act which transfers their country transfers the allegiance of those who remain in it; and the law which may be denominated political is necessarily changed, although that which regulates

the intercourse and general conduct of individuals remains in force, until altered by the newly created power of the state.

On the 2d of February, 1819, Spain ceded Florida to the United States. The sixth article of the treaty of cession contains the following provision: "The inhabitants of the territories, which his Catholic majesty cedes to the United States by this treaty, shall be incorporated in the union of the United States, as soon as may be consistent with the principles of the federal constitution, and admitted to the enjoyment of the privileges, rights, and immunities of the citizens of the United States."

This treaty is the law of the land, and admits the inhabitants of Florida to the enjoyment of the privileges, rights, and immunities of the citizens of the United States. It is unnecessary to inquire whether this is not their condition, independent of stipulation. They do not, however, participate in political power; they do not share in the government, till Florida shall become a state. In the meantime Florida continues to be a territory of the United States, governed by virtue of that clause in the constitution which empowers congress "to make all needful rules and regulations respecting the territory, or other property, belonging to the United States."

Perhaps the power of governing a territory belonging to the United States, which has not, by becoming a state, acquired the means of self-government, may result necessarily from the facts that it is not within the jurisdiction of any particular state, and is within the power and jurisdiction of the United States. The right to govern may be the inevitable consequence of the right to acquire territory. Whichever may be the source whence the power is derived, the possession of it is unquestioned. In execution of it, congress, in 1822, passed "An Act for the Establishment of a territorial Government in Florida;" and on the 3d of March, 1823, passed another act to amend the act of 1822. Under this act, the territorial legislature enacted the law now under consideration.

The fifth section of the act of 1823 creates a territorial legislature, which shall have legislative powers over all rightful objects of legislation; but no law shall be valid which is inconsistent with the laws and constitution of the United States.

The seventh section enacts, "That the judicial power shall be vested in two superior courts, and in such inferior courts, and justices of the peace, as the legislative council of the territory may from time to

time establish." After prescribing the place of session, and the jurisdictional limits of each court, the act proceeds to say: "Within its limits, herein described, each court shall have jurisdiction in all criminal cases, and exclusive jurisdiction in all capital offences, and original jurisdiction in all civil cases of the value of one hundred dollars, arising under, and cognizable by, the laws of the territory, now in force therein, or which may at any time be enacted by the legislative council thereof."

The eighth section enacts, "That each of the said superior courts shall, moreover, have and exercise the same jurisdiction, within its limits, in all cases arising under the laws and constitution of the United States, which, by an Act to establish the Judicial Courts of the United States, approved the 24th of September, 1789, and an Act in addition to the Act entitled an Act to establish the Judicial Courts of the United States, approved the 2d of March, 1793, was vested in the court of Kentucky district."

The powers of the territorial legislature extend to all rightful objects of legislature, subject to the restriction that their laws shall not be "inconsistent with the laws and constitution of the United States." As salvage is admitted to come within this description, the act is valid, unless it can be brought within the restriction.

We think, then, that the act of the territorial legislature, erecting the court by whose decree the cargo of the Point à Petre was sold, is not "inconsistent with the laws and constitution of the United States," and is valid. Consequently, the sale made in pursuance of it changed the property, and the decree of the circuit court, awarding restitution of the property to the claimant, ought to be affirmed with costs.

NORTHERN TENDENCIES TOWARD SECESSION

We are often apt to think that the idea of secession was one that took its rise and remained popular entirely in the South, but a fair investigation will show that this is not the case. While the Federalists were in power during the administrations of Washington and Adams the dissatisfaction of the Republicans showed itself in the Kentucky and

Virginia resolutions, but when the Republicans came into power the Federalist strongholds were the ones to show dissatisfaction.

The purchase of Louisiana occasioned mutterings in New England. The embargo act of 1807 again gave rise to threats of nullification, the questions arising in the war of 1812 gave rise to the Hartford convention which, in spite of many attempts to whitewash it, certainly believed in the doctrines of State sovereignty and the right of secession as a final resort: later the abolitionists came to think that the constitution was a "covenant with hell and a compact with death," and declared for no union with slaveholders.

Yet it must be remembered that though such ideas were more common in the North from 1803 to 1828 than in the South, yet they were always confined to a radical and most dissatisfied minority. It was only after 1850 and in the South that the idea of secession grew until it was held by a majority of people in any wide territory.

JOSIAH QUINCY

Josiah Quincy was born in Boston, Feb. 4, 1772. He graduated from Harvard college in 1790 and studied law. From 1804 to 1813 he was one of the most radical of the Federalists in Congress and went to great lengths in his opposition to the admission of Louisiana and the war of 1812. Much of the opposition to these acts of the Republicans must be considered mere party politics, but Quincy might have been far-sighted enough to see that the admission of Louisiana would eventually bring about the struggle over slavery.

From 1823 to 1829 he was Mayor of Boston and from 1829 to 1845 president of Harvard University. He supported Fremont in 1856, and confessed that the great civil war had made him know his countrymen as he had never known them before. He died in July, 1864.

On the Admission of Louisiana

HOUSE OF REPRESENTATIVES, JAN. 14, 1811

Mr. Speaker:

I address you, sir, with anxiety and distress of mind, with me, wholly unprecedented. The friends of this bill seem to consider it as

the exercise of a common power; as an ordinary affair; a mere municipal regulation, which they expect to see pass without other questions than those concerning details. But, sir, the principle of this bill materially affects the liberties and rights of the whole people of the United States. To me it appears that it would justify a revolution in this country; and that, in no great length of time it may produce it. When I see the zeal and perseverance with which this bill has been urged along its parliamentary path, when I know the local interests and associated projects which combine to promote its success, all opposition to it seems manifestly unavailing. I am almost tempted to leave, without a struggle, my country to its fate. But, sir, while there is life, there is hope. So long as the fatal shaft has not yet sped, if Heaven so will, the bow may be broken and the vigor of the mischief-meditating arm withered. If there be a man in this House or nation, who cherishes the Constitution, under which we are assembled, as the chief stay of his hope, as the light which is destined to gladden his own day, and to soften even the gloom of the grave, by the prospects it sheds over his children, I fall not behind him in such sentiments. I will yield to no man in attachment to this Constitution, in veneration for the sages who laid its foundations, in devotion to those principles which form its cement and constitute its proportions. What then must be my feelings; what ought to be the feelings of a man, cherishing such sentiments, when he sees an act contemplated which lays ruin at the foot of all these hopes? When he sees a principle of action about to be usurped, before the operation of which the bands of this Constitution are no more than flax before the fire, or stubble before the whirlwind? When this bill passes, such an act is done; and such a principle is usurped.

Mr. Speaker, there is a great rule of human conduct, which he who honestly observes, cannot err widely from the path of his sought duty. It is, to be very scrupulous concerning the principles you select as the test of your rights and obligations; to be very faithful in noticing the result of their application; and to be very fearless in tracing and exposing their immediate effects and distant consequences. Under the sanction of this rule of conduct, I am compelled to declare *it as my deliberate opinion that if this bill passes, the bonds of this Union are, virtually, dissolved; that the states which compose it are free from their moral obligations, and that as it will be the right of all, so it will be the duty of some, to prepare, definitely, for a separation; amicably, if they can; violently if they must.*

(Mr. Quincy was here called to order by Mr. Poindexter, delegate from the Mississippi territory, for the words in italics. After it was decided, upon an appeal to the House, that Mr. Quincy was in order, he proceeded.)

I rejoice, Mr. Speaker, at the result of this appeal. Not from any personal consideration, but from the respect paid to the essential rights of the people, in one of their representatives. When I spoke of the separation of the states, as resulting from the violation of the Constitution contemplated in this bill, I spoke of it as a necessity, deeply to be deprecated; but as resulting from causes so certain and obvious as to be absolutely inevitable, when the effect of the principle is practically experienced. It is to preserve, to guard the Constitution of my country, that I denounce this attempt. I would rouse the attention of gentlemen from the apathy with which they seem beset. These observations are not made in a corner; there is no low intrigue; no secret machination. I am on the people's own ground; to them I appeal concerning their own rights, their own liberties, their own intent, in adopting this Constitution. The voice I have uttered, at which gentlemen startle with such agitation, is no unfriendly voice. I intended it as a voice of warning. By this people, and by the event, if this bill passes, I am willing to be judged, whether it be not a voice of wisdom.

The bill which is now proposed to be passed has this assumed principle for its basis; that the three branches of this national government, without recurrence to conventions of the people in the states, or to the legislatures of the states, are authorized to admit new partners to a share of the political power, in countries out of the original limits of the United States. Now, this assumed principle, I maintain to be altogether without any sanction in the Constitution. I declare it to be a manifest and atrocious usurpation of power; of a nature, dissolving, according to undeniable principles of moral law, the obligations of our national compact; and leading to all the awful consequences which flow from such a state of things. Concerning this assumed principle, which is the basis of this bill, this is the general position, on which I rest my argument; that if the authority, now proposed to be exercised, be delegated to the three branches of the government by virtue of the Constitution, it results either from its general nature, or from its particular provisions. I shall consider distinctly both these sources, in relation to this pretended power.

Touching the general nature of the instrument called the Constitution of the United States there is no obscurity; it has no fabled descent, like the palladium of ancient Troy, from the heavens. Its origin is not confused by the mists of time, or hidden by the darkness of passed, unexplored ages; it is the fabric of our day. Some now living had a share in its construction; all of us stood by and saw the rising of the edifice. There can be no doubt about its nature. It is a political compact. By whom? And about what? The preamble to the instrument will answer these questions.

"We, the people of the United States, in order to form a more perfect union, establish justice, insure domestic tranquility, provide for the common defense, promote the general welfare, and secure the blessings of liberty to ourselves and our posterity, do ordain and establish this Constitution, for the United States of America."

It is, we the people of the United States, for ourselves and our posterity; not for the people of Louisiana; nor for the people of New Orleans or of Canada. None of these enter into the scope of the instrument; it embraces only "the United States of America." Who these are, it may seem strange in this place to inquire. But truly, sir, our imaginations have, of late, been so accustomed to wander after new settlements to the very ends of the earth, that it will not be time ill spent to inquire what this phrase means, and what it includes. These are not terms adopted at hazard; they have reference to a state of things existing anterior to the Constitution. When the people of the present United States began to contemplate a severance from their parent state, it was a long time before they fixed definitely the name by which they would be designated. In 1774, they called themselves "the Colonies and Provinces of North America." In 1775, "the Representatives of the United Colonies of North America." In the Declaration of Independence, "the Representatives of the United States of America." And finally, in the articles of confederation, the style of the confederacy is declared to be "the United States of America." It was with reference to the old articles of confederation, and to preserve the identity and established individuality of their character, that the preamble to this Constitution, not content, simply, with declaring that it is "we, the people of the United States," who enter into this compact, adds that it is for "the United States of America." Concerning the territory contemplated by the people of the United States, in these general terms, there can be

no dispute; it is settled by the treaty of peace, and included within the Atlantic ocean, the St. Croix, the lakes, and more precisely, so far as relates to the frontier, having relation to the present argument, within "a line to be drawn through the middle of the river Mississippi, until it intersect the northernmost part of the thirty-first degree of north latitude, thence within a line drawn due east on this degree of latitude to the river Apalachicola, thence along the middle of this river to its junction with the Flint river, thence straight to the head of the St. Mary's river, and thence down the St. Mary's to the Atlantic ocean."

I have been thus particular to draw the minds of gentlemen, distinctly, to the meaning of the terms used in the preamble; to the extent which "the United States" then included; and to the fact that neither New Orleans nor Louisiana was within the comprehension of the terms of this instrument. It is sufficient for the present branch of my argument to say, that there is nothing, in the general nature of this compact, from which the power, contemplated to be exercised in this bill, results. On the contrary, as the introduction of a new associate in political power implies, necessarily, a new division of power, and consequent diminution of the relative proportion of the former proprietors of it, there can certainly be nothing more obvious, than that from the general nature of the instrument no power can result to diminish and give away, to strangers, any proportion of the rights of the original partners. If such a power exist, it must be found, then, in the particular provisions in the Constitution. The question now arising is, in which of these provisions is given the power to admit new states, to be created in territories beyond the limits of the old United States. If it exist anywhere, it is either in the third section of the fourth article of the Constitution, or in the treaty-making power. If it result from neither of these, it is not pretended to be found anywhere else.

That part of the third section of the fourth article, on which the advocates of this bill rely, is the following: "New states may be admitted by the Congress, into this Union; but no new state shall be formed or erected within the jurisdiction of any other state, nor any state be formed by the junction of two or more states, or parts of states, without the consent of the legislatures of the states concerned, as well as of the Congress."

I know, Mr. Speaker, that the first clause of this paragraph has been read, with all the superciliousness of a grammarian's triumph—

"New states may be admitted by the Congress into this Union,"—accompanied with this most consequential inquiry: "Is not this a new state to be admitted? And is there not here an express authority?" I have no doubt this is a full and satisfactory argument to every one who is content with the mere colors and superficies of things. And if we were now at the bar of some stall-fed justice, the inquiry would insure the victory to the maker of it, to the manifest delight of the constables and suitors of his court. But, sir, we are now before the tribunal of the whole American people; reasoning concerning their liberties, their rights, their Constitution. These are not to be made the victims of the inevitable obscurity of general terms; nor the sport of verbal criticism. The question is concerning the intent of the American people, the proprietors of the old United States, when they agreed to this article. Dictionaries and spelling-books are here of no authority. Neither Johnson, nor Walker, nor Webster, nor Dilworth, has any voice in this matter. Sir, the question concerns the proportion of power reserved, by this Constitution, to every state in this Union. Have the three branches of this government a right, at will, to weaken and outweigh the influence, respectively secured to each state in this compact, by introducing, at pleasure, new partners, situate beyond the old limits of the United States? The question has not relation merely to New Orleans. The great objection is to the principle of the bill. If this principle be admitted, the whole space of Louisiana, greater, it is said, than the entire extent of the old United States, will be a mighty theatre, in which this government assumes the right of exercising this unparalleled power. And it will be; there is no concealment, it is intended to be exercised. Nor will it stop until the very name and nature of the old partners be overwhelmed by new-comers into the confederacy. Sir, the question goes to the very root of the power and influence of the present members of this Union. The real intent of this article is, therefore, an injury of most serious import; and is to be settled only by a recurrence to the known history and known relations of this people and their Constitution. These, I maintain, support this position, that the terms "new states," in this article, do not intend new political sovereignties, with territorial annexations, to be created without the original limits of the United States. * * *

But there is an argument stronger even than all those which have been produced, to be drawn from the nature of the power here proposed

to be exercised. Is it possible that such a power, if it had been intended to be given by the people, should be left dependent upon the effect of general expressions, and such, too, as were obviously applicable to another subject, to a particular exigency contemplated at that time? Sir, what is this power we propose now to usurp? Nothing less than a power changing all the proportions of the weight and influence possessed by the potent sovereignties composing this Union. A stranger is to be introduced to an equal share without their consent. Upon a principle pretended to be deduced from the Constitution, this government, after this bill passes, may and will multiply foreign partners in power at its own mere notion; at its irresponsible pleasure; in other words, as local interests, party passions, or ambitious views may suggest. It is a power that from its nature never could be delegated; never was delegated; and as it breaks down all the proportions of power guaranteed by the Constitution to the states, upon which their essential security depends, utterly annihilates the moral force of this political conduct. Would this people, so wisely vigilant concerning their rights, have transferred to Congress a power to balance, at its will, the political weight of any one state, much more of all the states, by authorizing it to create new states, at its pleasure, in foreign countries, not pretended to be within the scope of the Constitution, or the conception of the people at the time of passing it? This is not so much a question concerning the exercise of sovereignty, as it is who shall be sovereign—whether the proprietors of the good old United States shall manage their affairs in their own way; or whether they, and their Constitution, and their political rights, shall be trampled under foot by foreigners, introduced through a breach of the Constitution. The proportion of the political weight of each sovereign state constituting this Union depends upon the number of the states which have voice under the compact. This number the Constitution permits us to multiply at pleasure within the limits of the original United States, observing only the expressed limitations in the Constitution. But when, in order to increase your power of augmenting this number, you pass the old limits, you are guilty of a violation of the Constitution in a fundamental point; and in one, also, which is totally inconsistent with the intent of the contract and the safety of the states which established the association. What is the practical difference to the old partners whether they hold their liberties at the will of a master, or whether by admitting exterior states on

an equal footing with the original states, arbiters are constituted who, by availing themselves of the contrariety of interests and views, which in such a confederacy necessarily will arise, hold the balance among the parties which exist and govern us by throwing themselves into the scale most conformable to their purpose? In both cases there is an effective despotism. But the last is the more galling, as we carry the chain in the name and gait of freemen.

I have thus shown, and whether fairly, I am willing to be judged by the sound discretion of the American people, that the power proposed to be usurped in this bill, results neither from the general nature nor the particular provisions of the Federal Constitution; and that it is a palpable violation of it in a fundamental point; whence flow all the consequences I have indicated.

"But," says the gentleman from Tennessee (Mr. Rhea), "these people have been seven years citizens of the United States." I deny it, sir. As citizens of New Orleans, or Louisiana, they never have been, and by the mode proposed they never will be, citizens of the United States. They may girt upon us for a moment, but no real cement can grow from such an association. What the real situation of the inhabitants of those foreign countries is, I shall have occasion to show presently. "But," says the same gentleman, "if I have a farm, have not I a right to purchase another farm, in my neighborhood, and settle my sons upon it, and in time admit them to a share in the management of my household?" Doubtless, sir. But are these cases parallel? Are the three branches of this government owners of this farm, called the United States? I desire to thank heaven they are not. I hold my life, liberty, and property, and the people of the state from which I have the honor to be a representative hold theirs, by a better tenure than any this national government can give. Sir, I know your virtue. And I thank the Great Giver of every good gift that neither the gentleman from Tennessee nor his comrades, nor any, nor all the members of this House, nor of the other branch of the legislature, nor the good gentleman who lives in the palace yonder, nor all combined, can touch these my essential rights, and those of my friends and constituents, except in a limited and prescribed form. No, sir. We hold these by the laws, customs, and principles of the commonwealth of Massachusetts. Behind her ample shield we find refuge, and feel safety. I beg gentlemen not

to act upon the principle, that the commonwealth of Massachusetts is their farm.

"But," the gentleman adds, "what shall we do, if we do not admit the people of Louisiana into our Union? Our children are settling that country." Sir, it is no concern of mine what he does. Because his children have run wild and uncovered into the woods, is that a reason for him to break into my house, or the houses of my friends, to filch our children's clothes, in order to cover his children's nakedness? This Constitution never was, and never can be, strained to lap over all the wilderness of the West, without essentially affecting both the rights and convenience of its real proprietors. It was never constructed to form a covering for the inhabitants of the Missouri and Red river country. And whenever it is attempted to be stretched over them, it will rend asunder. I have done with this part of my argument. It rests upon this fundamental principle, that the proportion of political power, subject only to internal modifications, permitted by the Constitution, is an unalienable, essential, intangible right. When it is touched, the fabric is annihilated; for, on the preservation of these proportions depend our rights and liberties.

If we recur to the known relations existing among the states at the time of the adoption of this Constitution, the same conclusions will result. The various interests, habits, manners, prejudices, education, situation, and views, which excited jealousies and anxieties in the breasts of some of our most distinguished citizens, touching the result of the proposed Constitution, were potent obstacles to its adoption. The immortal leader of our revolution, in his letter to the President of the old Congress, written as president of the convention which formed this compact, thus speaks on this subject: "It is at all times difficult to draw, with precision, the line between those rights which must be surrendered, and those which may be reserved; and on the present occasion this difficulty was increased by a difference among the several states, as to their situation, extent, habits, and particular interests."

The debates of that period will show that the effect of the slave votes upon the political influence of this part of the country, and the anticipated variation of the weight of power to the West, were subjects of great and just jealousy to some of the best patriots in the Northern and Eastern states. Suppose, then, that it had been distinctly foreseen that, in addition to the effect of this weight, the whole popu-

lation of a world beyond the Mississippi was to be brought into this and the other branch of the legislature, to form our laws, control our rights, and decide our destiny. Sir, can it be pretended that the patriots of that day would for one moment have listened to it? They were not madmen. They had not taken degrees at the hospital of idiocy. They knew the nature of man, and the effect of his combinations in political societies. They knew that when the weight of particular sections of a confederacy was greatly unequal, the resulting power would be abused; that it was not in the nature of man to exercise it with moderation. The very extravagance of the intended use is a conclusive evidence against the possibility of the grant of such a power as is here proposed. Why, sir, I have already heard of six states, and some say there will be, at no great distance of time, more. I have also heard that the mouth of the Ohio will be far to the east of the centre of the contemplated empire. If the bill is passed, the principle is recognized. All the rest are mere questions of expediency. It is impossible such a power could be granted. It was not for these men that our fathers fought. It was not for them this Constitution was adopted. You have no authority to throw the rights and liberties and properties of this people into "hotch-pot" with the wild men on the Missouri, nor with the mixed, though more respectable race of Anglo-Hispano-Gallo-Americans, who bask on the sands in the mouth of the Mississippi. I make no objections to these from their want of moral qualities or political light. The inhabitants of New Orleans are, I suppose, like those of all other countries, some good, some bad, some indifferent. * * *

I will add only a few words, in relation to the moral and political consequences of usurping this power. I have said that it would be a virtual dissolution of the Union; and gentlemen express great sensibility at the expression. But the true source of terror is not the declaration I have made, but the deed you propose. Is there a moral principle of public law better settled, or more conformable to the plainest suggestions of reason, than that the violation of a contract by one of the parties may be considered as exempting the other from its obligations? Suppose, in private life, thirteen form a partnership, and ten of them undertake to admit a new partner without the concurrence of the other three, would it not be at their option to abandon the partnership, after so palpable an infringement of their rights? How much more, in the political partnership, where the admission of new associates, without previous authority, is so pregnant with obvious dangers and evils!

Again, it is settled as a principle of morality, among writers on public law, that no person can be obliged, beyond his intent at the time of contract. Now who believes, who dare assert, that it was the intention of the people, when they adopted this Constitution, to assign, eventually, to New Orleans and Louisiana, a portion of their political power; and to invest all the people those extensive regions might hereafter contain, with an authority over themselves and their descendants? When you throw the weight of Louisiana into the scale, you destroy the political equipoise contemplated at the time of forming the contract. Can any man venture to affirm that the people did intend such a comprehension as you now, by construction, give it? Or can it be concealed that, beyond its fair and acknowledged intent, such a compact has no moral force? If gentlemen are so alarmed at the bare mention of the consequences, let them abandon a measure which, sooner or later, will produce them. How long before the seeds of discontent will ripen, no man can foretell. But it is the part of wisdom not to multiply or scatter them. Do you suppose the people of the Northern and Atlantic states will, or ought to, look on with patience and see representatives and senators, from the Red river and Missouri, pouring themselves upon this and the other floor, managing the concerns of a seaboard fifteen hundred miles, at least, from their residence; and having a preponderancy in councils, into which, constitutionally, they could never have been admitted? I have no hesitation upon this point. They neither will see it, nor ought to see it, with content. It is the part of a wise man to foresee danger and to hide himself. This great usurpation, which creeps into this House, under the plausible appearance of giving content to that important point, New Orleans, starts up a gigantic power to control the nation. Upon the actual condition of things, there is, there can be, no need of concealment. It is apparent to the blindest vision. By the course of nature, and conformable to the acknowledged principles of the Constitution, the sceptre of power, in this country, is passing toward the Northwest. Sir, there is to this no objection. The right belongs to that quarter of the country. Enjoy it; it is yours. Use the powers granted as you please. But take care, in your haste after effectual dominion, not to overload the scale by heaping it with these new acquisitions. Grasp not too eagerly at your purpose. In your speed after uncontrolled sway, trample not down this Constitution. * * *

New states are intended to be formed beyond the Mississippi.

There is no limit to men's imaginations, on this subject, short of California and Columbia river. When I said that the bill would justify a revolution and would produce it, I spoke of its principle and its practical consequences. To this principle and those consequences I would call the attention of this House and nation. If it be about to introduce a condition of things absolutely insupportable, it becomes wise and honest men to anticipate the evil, and to warn and prepare the people against the event. I have no hesitation on the subject. The extension of this principle to the states contemplated beyond the Mississippi, cannot, will not, and ought not to be borne. And the sooner the people contemplate the unavoidable result the better; the more hope that the evils may be palliated or removed.

Mr. Speaker, what is this liberty of which so much has been said? Is it to walk about this earth, to breathe this air, to partake the common blessings of God's providence? The beasts of the field and the birds of the air unite with us in such privileges as these. But man boasts a purer and more ethereal temperature. His mind grasps in its view the past and future, as well as the present. We live not for ourselves alone. That which we call liberty is that principle on which the essential security of our political condition depends. It results from the limitations of our political system, prescribed in the Constitution. These limitations, so long as they are faithfully observed, maintain order, peace, and safety. When they are violated, in essential particulars, all the concurrent spheres of authority rush against each other; and disorder, derangement, and convulsions are, sooner or later, the necessary consequences.

With respect to this love of our Union, concerning which so much sensibility is expressed, I have no fears about analyzing its nature. There is in it nothing of mystery. It depends upon the qualities of that Union, and it results from its effects upon our and our country's happiness. It is valued for "that sober certainty of waking bliss" which it enables us to realize. It grows out of the affections, and has not, and cannot be made to have, anything universal in its nature. Sir, I confess it: the first public love of my heart is the Commonwealth of Massachusetts. There is my fireside; there are the tombs of my ancestors—

> "Low lies that land, yet blest with fruitful stores,
> Strong are her sons, though rocky are her shores;
> And none, ah! none, so lovely to my sight,
> Of all the lands which heaven o'erspreads with light."

The love of this Union grows out of this attachment to my native soil, and is rooted in it. I cherish it, because it affords the best external hope of her peace, her prosperity, her independence. I oppose this bill from no animosity to the people of New Orleans; but from the deep conviction that it contains a principle incompatible with the liberties and safety of my country. I have no concealment of my opinion. The bill, if it passes, is a death-blow to the Constitution. It may, afterward, linger; but, lingering, its fate will, at no very distant period, be consummated.

THE HARTFORD CONVENTION

The Hartford convention was suggested as early as 1808 in a letter from Harrison J. Otis to Josiah Quincy. The New England States refused to furnish militia for the use of the Government, and as a consequence they were left to defend themselves. Their general dissatisfaction with the conduct of the war caused delegates from Massachusetts, Connecticut, Rhode Island and from districts in Vermont and New Hampshire to meet together at Hartford to discuss the situation. Their conclusions are given below.

REPORT

The delegates from the legislatures of the states of Massachusetts, Connecticut, and Rhode Island, and from the counties of Grafton and Cheshire in the state of New Hampshire and the county of Windham in the state of Vermont, assembled in convention, beg leave to report the following result of their conferences:

The convention is deeply impressed with a sense of the arduous nature of the commission which they were appointed to execute, of devising the means of defense against dangers, and of relief from oppressions proceeding from the acts of their own government, without violating constitutional principles, or disappointing the hopes of a suffering and injured people. To prescribe patience and firmness to those who are already exhausted by distress, is sometimes to drive them to despair, and the progress towards reform by the regular road, is irksome to those whose imaginations discern, and whose feelings prompt, to a shorter course. But when abuses, reduced to a system, and accumulated through a course of years, have pervaded every department of government, and spread corruption through every region of the state; when these are clothed with the forms of law, and enforced by an execu-

tive whose will is their source, no summary means of relief can be applied without recourse to direct and open resistance. This experiment, even when justifiable, cannot fail to be painful to the good citizen; and the success of the effort will be no security against the danger of the example. Precedents of resistance to the worst administration are eagerly seized by those who are naturally hostile to the best. Necessity alone can sanction a resort to this measure; and it should never be extended in duration or degree beyond the exigency, until the people, not merely in the fervour of sudden excitement, but after full deliberation, are determined to change the Constitution.

It is a truth, not to be concealed, that a sentiment prevails to no inconsiderable extent, that administrations have given such constructions to that instrument and practiced so many abuses under colour of its authority, that the time for a change is at hand. Those who so believe, regard the evils which surround them as intrinsic and incurable defects in the Constitution. They yield to a persuasion, that no change, at any time, or on any occasion, can aggravate the misery of their country. This opinion may ultimately prove to be correct. But as the evidence on which it rests is not yet conclusive, and as measures adopted upon the assumption of its certainty might be irrevocable, some general considerations are submitted, in the hope of reconciling all to a course of moderation and firmness, which may save them from the regret incident to sudden decisions, probably avert the evil, or at least insure consolation and success in the last resort.

The Constitution of the United States, under the auspices of a wise and virtuous administration, proved itself competent to all the objects of national prosperity comprehended in the views of its framers. No parallel can be found in history, of a transition so rapid as that of the United States from the lowest depression to the highest felicity—from the condition of weak and disjointed republics, to that of a great, united, and prosperous nation.

Although this high state of public happiness has undergone a miserable and afflicting reverse, through the prevalence of a weak and profligate policy, yet the evils and afflictions which have thus been induced upon the country, are not peculiar to any form of government. The lust and caprice of power, the corruption of patronage, the oppression of the weaker interests of the community by a stronger, heavy taxes, wasteful expenditures, and unjust and ruinous wars, are the natural offspring of bad administrations, in all ages and countries. It was

indeed to be hoped that the rulers of these states would not make such disastrous haste to involve their infancy in the embarrassments of old and rotten institutions. Yet all this have they done; and their conduct calls loudly for their dismission and disgrace. But to attempt upon every abuse of power to change the Constitution, would be to perpetuate the evils of revolution.

Again, the experiment of the powers of the Constitution to regain its vigour, and of the people to recover from their delusions, has been hitherto made under the greatest possible disadvantages arising from the state of the world. The fierce passions which have convulsed the nations of Europe, have passed the ocean, and finding their way to the bosoms of our citizens, have afforded to administration the means of perverting public opinion, in respect to our foreign relations, so as to acquire its aid in the indulgence of their animosities, and the increase of their adherents. Further, a reformation of public opinion, resulting from dear-bought experience, in the Southern Atlantic states, at least, is not to be despaired of. They will have felt that the Eastern states cannot be made exclusively the victims of a capricious and impassioned policy. They will have seen that the great and essential interests of the people are common to the South and to the East. They will realize the fatal errors of a system which seeks revenge for commercial injuries in the sacrifice of commerce, and aggravates by needless wars, to an immeasurable extent, the injuries it profresses to redress. They may discard the influence of visionary theorists, and recognize the benefits of a practical policy. Indications of this desirable revolution of opinion, among our brethren in those states, are already manifested. While a hope remains of its ultimate completion, its progress should not be retarded or stopped, by exciting fears which must check these favourable tendencies, and frustrate the efforts of the wisest and best men in those states, to accelerate this propitious change.

Finally, if the Union be destined to dissolution, by reason of the multiplied abuses of bad administrations, it should, if possible, be the work of peaceable times, and deliberate consent. Some new form of confederacy should be substituted among those states which shall intend to maintain a federal relation to each other. Events may prove that the causes of our calamities are deep and permanent. They may be found to proceed, not merely from the blindness of prejudice, pride of opinion, violence of party spirit, or the confusion of the times; but they may be traced to implacable combinations of individuals, or of states, to

monopolize power and office, and to trample without remorse upon the rights and interests of commercial sections of the Union. Whenever it shall appear that these causes are radical and permanent, a separation, by equitable arrangement, will be preferable to an alliance by constraint, among nominal friends, but real enemies, inflamed by mutual hatred and jealousy, and inviting, by intestine divisions, contempt and aggression from abroad. But a severance of the Union by one or more states, against the will of the rest, and especially in a time of war, can be justified only by absolute necessity. These are among the principal objections against precipitate measures tending to disunite the states, and when examined in connection with the farewell address of the father of his country, they must, it is believed, be deemed conclusive.

Under these impressions, the convention have proceeded to confer and deliberate upon the alarming state of public affairs, especially as affecting the interests of the people who have appointed them for this purpose, and they are naturally led to a consideration, in the first place, of the dangers and grievances which menace an immediate or speedy pressure, with a view of suggesting means of present relief; in the next place, of such as are of a more remote and general description, in the hope of attaining future security.

Among the subjects of complaint and apprehension, which might be comprised under the former of these propositions, the attention of the convention has been occupied with the claims and pretensions advanced, and the authority exercised over the militia, by the executive and legislative departments of the national government. Also, upon the destitution of the means of defense in which the Eastern states are left; while at the same time they are doomed to heavy requisitions of men and money for national objects.

That acts of Congress in violation of the Constitution are absolutely void, is an undeniable position. It does not, however, consist with respect and forbearance due from a confederate state towards the general government, to fly to open resistance upon every infraction of the Constitution. The mode and the energy of the opposition should always conform to the nature of the violation, the intention of its authors, the extent of the injury inflicted, the determination manifested to persist in it, and the danger of delay. But in cases of deliberate, dangerous, and palpable infractions of the Constitution, affecting the sovereignty of a state, and liberties of the people, it is not only the right but the duty of such a state to interpose its authority for their protection,

in the manner best calculated to secure that end. When emergencies occur which are either beyond the reach of the judicial tribunals, or too pressing to admit of the delay incident to their forms, states which have no common umpire, must be their own judges, and execute their own decisions. It will thus be proper for the several states to await the ultimate disposal of the obnoxious measures recommended by the secretary of war, or pending before Congress, and so to use their power according to the character these measures shall finally assume, as effectually to protect their own sovereignty, and the rights and liberties of their citizens.

The next subject which has occupied the attention of the convention is the means of defense against the common enemy. This naturally leads to the inquiries, whether any expectation can be reasonably entertained, that adequate provision for the defense of the Eastern states will be made by the national government? Whether the several states can, from their own resources, provide for self-defense and fulfil the requisitions which are to be expected for the national treasury? and, generally, what course of conduct ought to be adopted by those states, in relation to the great object of defense.

Without pausing at present to comment upon the causes of the war, it may be assumed as a truth, officially announced, that to achieve the conquest of Canadian territory, and to hold it as a pledge for peace, is the deliberate purpose of the administration. This enterprise, commenced at a period when government possessed the advantage of selecting the time and occasion for making a sudden descent upon an unprepared enemy, now languishes in the third year of the war. It has been prosecuted with various fortune, and occasional brilliancy of exploit, but without any solid acquisition. The British armies have been recruited by veteran regiments. Their navy commands Ontario. The American ranks are thinned by the casualties of war. Recruits are discouraged by the unpopular character of the contest, and by the uncertainty of receiving their pay.

In the prosecution of this favourite warfare, administration have left the exposed and vulnerable parts of the country destitute of all the efficient means of defense. The main body of the regular army has been marched to the frontier. The navy has been stripped of a great part of its sailors for the service of the lakes. Meanwhile the enemy scours the seacoast, blockades our ports, ascends our bays and rivers, makes actual descents in various and distant places, holds some by

force, and threatens all that are assailable with fire and sword. The seaboard of four of the New England states, following its curvatures, presents an extent of more than seven hundred miles, generally occupied by a compact population and accessible by a naval force, exposing a mass of people and property to the devastation of the enemy, which bears a great proportion to the residue of the maritime frontier of the United States. This extensive shore has been exposed to frequent attacks, repeated contributions, and constant alarms. The regular forces detached by the national government for its defense are mere pretexts for placing officers of high rank in command. They are besides confined to a few places, and are too insignificant in number to be included in any computation.

These states have thus been left to adopt measures for their own defense. The militia have been constantly kept on the alert, and harassed by garrison duties, and other hardships, while the expenses, of which the national government declined the reimbursement, threaten to absorb all the resources of the states. The President of the United States has refused to consider the expense of the militia detached by state authority, for the indispensable defense of the state, as chargeable to the Union, on the ground of a refusal by the executive of the state to place them under the command of officers of the regular army. Detachments of militia placed at the disposal of the general government, have been dismissed either without pay, or with depreciated paper. The prospect of the ensuing campaign is not enlivened by the promise of any alleviation of these grievances. From authentic documents, extorted by necessity from those whose inclination might lead them to conceal the embarrassments of the government, it is apparent that the treasury is bankrupt, and its credit prostrate. So deplorable is the state of the finances that those who feel for the honour and safety of the country, would be willing to conceal the melancholy spectacle, if those whose infatuation has produced this state of fiscal concerns had not found themselves compelled to unveil it to public view.

If the war be continued, there appears no room for reliance upon the national government for the supply of those means of defense which must become indispensable to secure these states from desolation and ruin. Nor is it possible that the states can discharge this sacred duty from their own resources, and continue to sustain the burden of the national taxes. The administration, after a long perseverance in plans to baffle every effort of commercial enterprise, had fatally succeeded

in their attempts at the epoch of the war. Commerce, the vital spring of New England's prosperity, was annihilated. Embargoes, restrictions, and the rapacity of revenue officers, had completed its destruction. The various objects for the employment of productive labour, in the branches of business dependent on commerce, have disappeared. The fisheries have shared its fate. Manufactures, which government has professed an intention to favour and to cherish, as an indemnity for the failure of these branches of business, are doomed to struggle in their infancy with taxes and obstructions, which cannot fail most seriously to affect their growth. The specie is withdrawn from circulation. The landed interest, the last to feel these burdens, must prepare to become their principal support, as all other sources of revenue must be exhausted. Under these circumstances, taxes, of a description and amount unprecedented in this country, are in a train of imposition, the burden of which must fall with the heaviest pressure upon the states east of the Potomac. The amount of these taxes for the ensuing year cannot be estimated at less than five millions of dollars upon the New England states, and the expenses of the last year for defense, in Massachusetts alone, approaches to one million dollars.

From these facts it is almost superfluous to state the irresistible inference that these states have no capacity of defraying the expense requisite for their own protection, and, at the same time, of discharging the demands of the national treasury.

The last inquiry, what course of conduct ought to be adopted by the aggrieved states, is in a high degree momentous. When a great and brave people shall feel themselves deserted by their government, and reduced to the necessity either of submission to a foreign enemy, or of appropriating to their own use those means of defense which are indispensable to self-preservation, they cannot consent to wait, passive spectators of approaching ruin, which it is in their power to avert, and to resign the last remnant of their industrious earnings to be dissipated in support of measures destructive of the best interests of the nation.

This convention will not trust themselves to express their conviction of the catastrophe to which such a state of things inevitably tends. Conscious of their high responsibility to God and their country, solicitous for the continuance of the Union, as well as the sovereignty of the states, unwilling to furnish obstacles to peace—resolute never to submit to a foreign enemy, and confiding in the Divine care and pro-

tection, they will, until the last hope shall be extinguished, endeavor to avert such consequences.

With this view they suggest an arrangement, which may at once be consistent with the honour and interest of the national government, and the security of these states. This it will not be difficult to conclude, if that government should be so disposed. By the terms of it these states might be allowed to assume their own defense, by the militia or other troops. A reasonable portion, also, of the taxes raised in each state might be paid into its treasury, and credited to the United States, but to be appropriated to the defense of such state, to be accounted for with the United States. No doubt is entertained that by such an arrangement, this portion of the country could be defended with greater effect, and in a mode more consistent with economy, and the public convenience, than any which has been practiced.

Should an application for these purposes, made to Congress by the state legislatures, be attended with success, and should peace upon just terms appear to be unattainable, the people would stand together for the common defense, until a change of administration, or of disposition in the enemy, should facilitate the occurrence of that auspicious event. It would be inexpedient for this convention to diminish the hope of a successful issue to such an application, by recommending, upon supposition of a contrary event, ulterior proceedings. Nor is it indeed within their province. In a state of things so solemn and trying as may then arise, the legislatures of the states, or conventions of the whole people, or delegates appointed by them for the express purpose in another convention, must act as such urgent circumstances may then require.

But the duty incumbent upon this convention will not have been performed, without exhibiting some general view of such measures as they deem essential to secure the nation against a relapse into difficulties and dangers, should they, by the blessing of Providence, escape from their present condition, without absolute ruin. To this end a concise retrospect of the state of this nation under the advantages of a wise administration, contrasted with the miserable abyss into which it is plunged by the profligacy and folly of political theorists, will lead to some practical conclusions. On this subject, it will be recollected that the immediate influence of the Federal Constitution upon its first adoption, and for twelve succeeding years, upon the prosperity and happiness of the nation, seemed to countenance a belief in the transcendency of its

perfection over all other human institutions. In the catalogue of blessings which have fallen to the lot of the most favoured nations, none could be enumerated from which our country was excluded—a free Constitution, administered by great and incorruptible statesmen, realized the fondest hopes of liberty and independence. The progress of agriculture was stimulated by the certainty of value in the harvest—and commerce, after traversing every sea, returned with the riches of every clime. A revenue, secured by a sense of honour, collected without oppression, and paid without murmurs, melted away the national debt; and the chief concern of the public creditor arose from its too rapid diminution. The wars and commotions of the European nations, and their interruptions of the commercial intercourse afforded to those who had not promoted, but who would have rejoiced to alleviate their calamities, a fair and golden opportunity, by combining themselves to lay a broad foundation for national wealth. Although occasional vexations to commerce arose from the furious collisions of the powers at war, yet the great and good men of that time conformed to the force of circumstances which they could not control, and preserved their country in security from the tempests which overwhelmed the old world, and threw the wreck of their fortunes on these shores. Respect abroad, prosperity at home, wise laws made by honoured legislators, and prompt obedience yielded by a contented people, had silenced the enemies of republican institutions. The arts flourished—the sciences were cultivated—the comforts and conveniences of life were universally diffused—and nothing remained for succeeding administrations but to reap the advantages and cherish the resources flowing from the policy of their predecessors.

But no sooner was a new administration established in the hands of the party opposed to the Washington policy, than a fixed determination was perceived and avowed of changing a system which had already produced these substantial fruits. The consequences of this change, for a few years after its commencement, were not sufficient to counteract the prodigious impulse towards prosperity, which had been given to the nation. But a steady perseverance in the new plans of administration, at length developed their weakness and deformity, but not until a majority of the people had been deceived by flattery, and inflamed by passion, into blindness of their defects. Under the withering influence of this new system, the declension of the nation has been uniform and rapid. The richest advantages for securing the great objects of the

Constitution have been wantonly rejected. While Europe reposes from the convulsions that had shaken down her ancient institutions, she beholds with amazement this remote country, once so happy and so envied, involved in a ruinous war, and excluded from intercourse with the rest of the world.

To investigate and explain the means whereby this fatal reverse has been effected, would require a voluminous discussion. Nothing more can be attempted in this report than a general allusion to the principal outlines of the policy which has produced this vicissitude. Among these may be enumerated—

First.—A deliberate and extensive system for effecting a combination among certain states, by exciting local jealousies and ambition, so as to secure to popular leaders in one section of the Union, the control of public affairs in perpetual succession. To which primary object most other characteristics of the system may be reconciled.

Secondly.—The political intolerance displayed and avowed in excluding from office men of unexceptionable merit, for want of adherence to the executive creed.

Thirdly.—The infraction of the judiciary authority and rights, by depriving judges of their offices in violation of the Constitution.

Fourthly.—The abolition of existing taxes, requisite to prepare the country for those changes to which nations are always exposed, with a view to the acquisition of popular favour.

Fifthly.—The influence of patronage in the distribution of offices, which in these states has been almost invariably made among men the least entitled to such distinction, and who have sold themselves as ready instruments for distracting public opinion, and encouraging administration to hold in contempt the wishes and remonstrances of a people thus apparently divided.

Sixthly.—The admission of new states into the Union formed at pleasure in the western region, has destroyed the balance of power which existed among the original states, and deeply affected their interest.

Seventhly.—The easy admission of naturalized foreigners, to places of trust, honour or profit, operating as an inducement to the malcontent subjects of the old world to come to these states, in quest of executive patronage, and to repay it by an abject devotion to executive measures.

Eighthly.—Hostility to Great Britain, and partiality to the late gov-

ernment of France, adopted as coincident with popular prejudice; and subservient to the main object, party power. Connected with these must be ranked erroneous and distorted estimates of the power and resources of those nations, of the probable results of their controversies, and of our political relations to them respectively.

Lastly and principally.—A visionary and superficial theory in regard to commerce, accompanied by a real hatred but a feigned regard to its interests, and a ruinous perseverance in efforts to render it an instrument of coercion and war.

But it is not conceivable that the obliquity of any administration could, in so short a period, have so nearly consummated the work of national ruin, unless favoured by defects in the Constitution.

To enumerate all the improvements of which that instrument is susceptible, and to propose such amendments as might render it in all respects perfect, would be a task which this convention has not thought proper to assume. They have confined their attention to such as experience has demonstrated to be essential, and even among these, some are considered entitled to a more serious attention than others. They are suggested without any intentional disrespect to other states, and are meant to be such as all shall find an interest in promoting. Their object is to strengthen, and if possible to perpetuate, the union of the states, by removing the grounds of existing jealousies, and providing for a fair and equal representation, and a limitation of powers, which have been misused.

THEREFORE RESOLVED,

That it be and hereby is recommended to the legislatures of the several states represented in this convention, to adopt all such measures as may be necessary effectually to protect the citizens of said states from the operation and effects of all acts which have been or may be passed by the Congress of the United States, which shall contain provisions, subjecting the militia or other citizens to forcible drafts, conscriptions, or impressments, not authorized by the Constitution of the United States.

Resolved, That it be and hereby is recommended to the said legislatures to authorize an immediate and earnest application to be made to the government of the United States, requesting their consent to some arrangement, whereby the said states may, separately or in concert, be empowered to assume upon themselves the defense of their territory against the enemy; and a reasonable portion of the taxes, collected

within said states, may be paid into the respective treasuries thereof, and appropriated to the payment of the balance due said states, and to the future defense of the same. The amount so paid into the said treasuries to be credited, and the disbursements made as aforesaid to be charged to the United States.

Resolved, That it be, and hereby is recommended to the legislatures of the aforesaid states, to pass laws (where it has not already been done) authorizing the governors or commanders-in-chief of their militia to make detachments from the same, or to form voluntary corps, as shall be most convenient and conformable to their constitutions, and to cause the same to be well armed, equipped and disciplined, and held in readiness for service; and upon the request of the governor of either of the other states to employ the whole of such detachments or corps, as well as the regular forces of the state, or such part thereof as may be required and can be spared consistently with the safety of the state, in assisting the state, making such request to repel any invasion thereof which shall be made or attempted by the public enemy.

Resolved, That the following amendments of the Constitution of the United States be recommended to the states represented as aforesaid, to be proposed by them for adoption by the state legislatures, and in such cases as may be deemed expedient by a convention chosen by the people of each state.

And it is further recommended, that the said states shall persevere in their efforts to obtain such amendments, until the same shall be effected.

First. Representatives and direct taxes shall be apportioned among the several states which may be included within this Union, according to their respective numbers of free persons, including those bound to serve for a term of years, and excluding Indians not taxed, and all other persons.

Second. No new state shall be admitted into the Union by Congress, in virtue of the power granted by the Constitution, without the concurrence of two-thirds of both houses.

Third. Congress shall not have power to lay any embargo on the ships or vessels of the citizens of the United States, in the ports or harbours thereof, for more than sixty days.

Fourth. Congress shall not have power, without the concurrence of two-thirds of both houses, to interdict the commercial intercourse between the United States and any foreign nation, or the dependencies thereof.

Fifth. Congress shall not make or declare war, or authorize acts of hostility against any foreign nation, without the concurrence of two-thirds of both houses, except such acts of hostility be in defense of the territories of the United States when actually invaded.

Sixth. No person who shall hereafter be naturalized, shall be eligible as a member of the Senate or House of Representatives of the United States, nor capable of holding any civil office under the authority of the United States.

Seventh. The same person shall not be elected president of the United States a second time; nor shall the president be elected from the same state two terms in succession.

Resolved, That if the application of these states to the government of the United States, recommended in a foregoing resolution, should be unsuccessful, and peace should not be concluded, and the defense of these states should be neglected, as it has been since the commencement of the war, it will, in the opinion of this convention, be expedient for the legislatures of the several states to appoint delegates to another convention, to meet at Boston in the state of Massachusetts, on the third Thursday of June next, with such powers and instructions as the exigency of a crisis so momentous may require.

Resolved, That the Hon. George Cabot, the Hon. Chauncey Goodrich, and the Hon. Daniel Lyman, or any two of them, be authorized to call another meeting of this convention to be holden in Boston, at any time before new delegates shall be chosen, as recommended in the above resolution, if in their judgment the situation of the country shall urgently require it.

Massachusetts

George Cabot,
Nathan Dane,
William Prescott,
Harrison Gray Otis,
Timothy Bigelow,
Joshua Thomas,
Samuel Sumner Wilde,
Joseph Lyman,
Stephen Longfellow, Jun.
Daniel Waldo,
Hodijah Baylies,
George Bliss.

Connecticut

CHAUNCEY GOODRICH,
JOHN TREADWELL,
JAMES HILLHOUSE,
ZEPHANIAH SWIFT,
NATHANIEL SMITH,
CALVIN GODDARD,
ROGER MINOT SHERMAN.

Rhode-Island

DANIEL LYMAN,
SAMUEL WARD,
EDWARD MANTON,
BENJAMIN HAZARD.

N. Hampshire

BENJAMIN WEST,
MILLS OLCOTT.

Vermont

WILLIAM HALL, Jun.

HENRY CLAY

HENRY CLAY was born in a district called "the Slashes," in Hanover County, Virginia, on the 12th of April, 1777. During his early life on a farm he managed to pick up the rudiments of an education at the common school, and in 1792 he became interested in the Court of Chancery at Richmond. He was admitted to the bar in 1797 and removed to Lexington, Kentucky, the same year.

In 1799 he advocated the gradual abolition of slavery in the state, but his views were not embodied in the new State Constitution.

In 1806 he was sent to the Senate to fill an unexpired term and was again chosen as Senator in 1809. In 1811 he became a Representative and was elected Speaker of the House. At the time he was a strong advocate of the War of 1812 and of what came to be considered the "American System," which stood for a high protective tariff and internal improvement at government expense. In 1834 he was one of the

four candidates for Presidency. When the election was thrown into the House, Clay and his friends supported John Quincy Adams as against General Jackson. Adams made him Secretary of State, and Jackson's adherents immediately raised the cry of "bargain and corruption." He fought a bloodless duel with John Randolph, who had denounced this coalition as a "combination of the Puritan and blackleg" in 1826.

He again stood for the Presidency in 1832, but was defeated by Jackson. Out of the anti-Jacksonian element was formed the new Whig party with Clay and Webster as its leaders.

In 1820 he had been one of the foremost in advocating the Missouri Compromise and in 1833 formulated the compromise on the tariff. Ever after this he stood as the embodiment of this spirit, one who believed that it was possible by mutual yielding on radical points to preserve the Union intact in spite of the tendencies to disintegration which he saw only too well.

He was again a candidate for the Presidency in 1844, and received 105 electoral votes, but was defeated by Polk. The compromise of 1850 was his handiwork. He died in 1852.

He did his best to preserve the Union by constitutional means, but the forces at work were too strong and too radically contradictory to make permanent reconciliation possible.

THE "AMERICAN POLICY" OF INTERNAL IMPROVEMENT

Mr. Clay delivered this speech, in the House of Representatives of the United States, on the sixteenth of January, 1824; on "a bill authorizing the President of the United States to cause certain surveys and estimates to be made on the subject of roads and canals:"—

MR. CHAIRMAN: I cannot enter on the discussion of the subject before us, without first asking leave to express my thanks for the kindness of the committee, in so far accommodating me as to agree, unanimously, to adjourn its sitting to the present time, in order to afford me the opportunity of exhibiting my views; which, however, I fear I shall do very unacceptably. As a requittal for this kindness, I will endeavor, as far as practicable, to abbreviate what I have to present to your consideration. Yet, on a question of this extent and moment, there are so many topics which demand a deliberate examination, that, from the

nature of the case, it will be impossible, I am afraid, to reduce the argument to any thing that the committee will consider a reasonable compass.

It is known to all who hear me, that there has now existed for several years a difference of opinion between the executive and legislative branches of this government, as to the nature and extent of certain powers conferred upon it by the constitution. Two succesive Presidents have returned to Congress bills which had previously passed both Houses of that body, with a communication of the opinion, that Congress, under the constitution, possessed no power to enact such laws. High respect, personal and official, must be felt by all, as it is due, to those distinguished officers, and to their opinions, thus solemnly announced; and the most profound consideration belongs to our present chief magistrate, who has favored this House with a written argument, of great length and labor, consisting of not less than sixty or seventy pages, in support of his exposition of the constitution. From the magnitude of the interests involved in the question, all will readily concur that, if the power is granted, and does really exist, it ought to be vindicated, upheld, and maintained, that the country may derive the great benefits which may flow from its prudent exercise. If it has not been communicated to Congress, then all claim to it should be, at once, surrendered. It is a circumstance of peculiar regret to me, that one more competent than myself had not risen to support the course which the legislative department has heretofore felt itself bound to pursue on this great question. Of all the trusts which are created by human agency, that is the highest, most solemn, and most responsible, which involves the exercise of political power. Exerted when it has not been intrusted, the public functionary is guilty of usurpation. And his infidelity to the public good is not, perhaps, less culpable, when he neglects or refuses to exercise a power which has been fairly conveyed, to promote the public prosperity. If the power, which he thus forbears to exercise, can only be exerted by him—if no other public functionary can employ it, and the public good requires its exercise, his treachery is greatly aggravated. It is only in those cases where the object of the investment of power is the personal ease or aggrandizement of the public agent, that his forbearance to use it is praiseworthy, gracious, or magnanimous.

I was extremely happy to find, that, on many of the points of the argument of the honorable gentleman from Virginia, Mr. Barbour, there

is entire concurrence between us, widely as we differ in our ultimate conclusions. On this occasion (as on all others on which that gentleman obliges the House with an expression of his opinions), he displayed great ability and ingenuity; and, as well from the matter as from the respectful manner of his argument, it is deserving of the most thorough consideration. I am compelled to differ from that gentleman at the very threshold. He commenced by laying down as a general principle, that, in the distribution of powers among our federal and State governments, those which are of a municipal character are to be considered as appertaining to the State governments, and those which relate to external affairs, to the general government. If I may be allowed to throw the argument of the gentleman into the form of a syllogism (a shape which I presume would be quite agreeable to him), it amounts to this: municipal powers belong exclusively to the State governments; but the power to make internal improvements is municipal; therefore it belongs to the State governments alone. I deny both the premises and the conclusion. If the gentleman had affirmed that certain municipal powers, and the great mass of them, belong to the State governments, his proposition would have been incontrovertible. But if he had so qualified it, it would not have assisted the gentleman at all in his conclusion. But surely the power of taxation, the power to regulate the value of coin, the power to establish a uniform standard of weights and measures, to establish post offices and post roads, to regulate commerce among the several States, that in relation to the judiciary, besides many other powers indisputably belonging to the federal government, are strictly municipal. If, as I understood the gentleman in the course of the subsequent part of his argument to admit, some municipal powers belong to the one system, and some to the other, we shall derive very little aid from the gentleman's principle, in making the discrimination between the two. The question must ever remain open—whether any given power, and, of course, that in question, is or is not delegated to this government, or retained by the States?

The conclusion of the gentleman is, that all internal improvements belong to the State governments: that they are of a limited and local character, and are not comprehended within the scope of the federal powers, which relate to external or general objects. That many, perhaps most internal improvements, partake of the character described by the gentleman, I shall not deny. But it is no less true that there are others, emphatically national, which neither the policy, nor the

power, nor the interests, of any State will induce it to accomplish, and which can only be effected by the application of the resources of the nation. The improvement of the navigation of the Mississippi furnishes a striking example. This is undeniably a great and important object. The report of a highly scientific and intelligent officer of the engineer corps (which I hope will be soon taken up and acted upon) has shown that the cost of any practicable improvement in the navigation of that river, in the present state of the inhabitants of its banks, is a mere trifle in comparison to the great benefits which would accrue from it. I believe that about double the amount of the loss of a single steamboat and cargo (the Tennessee) would effect the whole improvement in the navigation of that river, which ought to be at this time attempted. In this great object twelve States and two territories are, in different degrees, interested. The power to effect the improvement of that river is surely not municipal, in the sense in which the gentleman used the term. If it were, to which of the twelve States and two territories concerned does it belong? It is a great object, which can only be effected by a confederacy. And here is existing that confederacy, and no other can lawfully exist: for the constitution prohibits the States, immediately interested, from entering into any treaty or compact with each other. Other examples might be given to show, that, if even the power existed, the inclination to exert it would not be felt, to effectuate certain improvements eminently calculated to promote the prosperity of the union. Neither of the three States, nor all of them united, through which the Cumberland road passes, would ever have erected that road. Two of them would have thrown in every impediment to its completion in their power. Federative in its character, it could only have been executed so far by the application of federative means. Again, the contemplated canal through New Jersey; that to connect the waters of the Chesapeake and Delaware; that to unite the Ohio and the Potomac, are all objects of a general and federative nature, in which the States, through which they might severally pass, could not be expected to feel any such special interest as would lead to their execution. Tending, as undoubtedly they would do, to promote the good of the whole, the power and the treasure of the whole must be applied to their execution, if they are ever consummated.

I do not think, then, that we shall be at all assisted in expounding the Constitution of the United States, by the principle which the gentleman from Virginia has suggested in respect to municipal powers.

The powers of both governments are undoubtedly municipal, often operating upon the same subject. I think a better rule than that which the gentleman furnished for interpreting the constitution, might be deduced from an attentive consideration of the peculiar character of the articles of confederation, as contrasted with that of the present constitution. By those articles, the powers of the thirteen United States were exerted collaterally. They operated through an intermediary. They were addressed to the several States, and their execution depended upon the pleasure and the co-operation of the States individually. The States seldom fulfilled the expectations of the general government in regard to its requisitions, and often wholly disappointed them. Languor and debility, in the movement of the old confederation, were the inevitable consequence of that arrangement of power. By the existing constitution, the powers of the general government act directly on the persons and things within its scope, without the intervention or impediments incident to any intermediary. In executing the great trust which the Constitution of the United States creates, we must, therefore, reject that interpretation of its provisions which would make the general government dependent upon those of the States for the execution of any of its powers, and may safely conclude that the only genuine construction would be that which should enable this government to execute the great purposes of its institution, without the co-operation, and, if indispensably necessary, even against the will, of any particular State. This is the characteristic difference between the two systems of government, of which we should never lose sight. Interpreted in the one way, we shall relapse into the feebleness and debility of the old confederacy. In the other, we shall escape from its evils, and fulfil the great purposes which the enlightened framers of the existing constitution intended to effectuate. The importance of this essential difference in the two forms of government, will be shown in the future progress of the argument.

Before I proceed to comment upon those parts of the constitution which appear to me to convey the power in question, I hope I shall be allowed to disclaim, for my part, several sources whence others have deduced the authority. The gentleman from Virginia seemed to think it remarkable that the friends of the power should disagree so much among themselves; and to draw a conclusion against its existence from the fact of this discrepancy. But I can see nothing extraordinary in this diversity of views. What is more common than for different men to contemplate the same subject under various aspects? Such is the

nature of the human mind, that enlightened men, perfectly upright in their intentions, differ in their opinions on almost every topic that could be mentioned. It is rather a presumption in favor of the cause which I am humbly maintaining, that the same result should be attained by so many various modes of reasoning. But, if contrariety of views may be pleaded with any effect against the advocates of the disputed power, it equally avails against their opponents. There is, for example, not a very exact coincidence in opinion between the President of the United States and the gentleman from Virginia. The President says, (page 25 of his book,) "the use of the existing road, by the stage, mail carrier, or post boy, in passing over it, as others do, is all that would be thought of; the jurisdiction and soil remaining to the State, with a right in the State, or those authorized by its legislature, to change the road at pleasure." Again, page 27, the President asks, "if the United States possessed the power, contended for under this grant, might they not, in adopting the roads of the individual States, for the carriage of the mail, as has been done, assume jurisdiction over them, and preclude a right to interfere with or alter them?" They both agree that the general government does not possess the power. The gentleman from Virginia admits, if I understood him correctly, that the designation of a State road as a post road, so far withdraws it from the jurisdiction of the State, that it cannot be afterwards put down or closed by the State, and in this he claims for the general government more power than the President concedes to it. The President, on the contrary, pronounces that "the absurdity of such a pretension," (that is, preventing, by the designation of a post road, the power of the State from altering or changing it,) "must be apparent to all who examine it!" The gentleman thinks that the designation of a post road withdraws it entirely, so far as it is used for that purpose, from the power of the whole State; whilst the President thinks it absurd to assert that a mere county court may not defeat the execution of a law of the United States! The President thinks that, under the power of appropriating the money of the United States, Congress may apply it to any object of internal improvement, provided it does not assume any territorial jurisdiction; and, in this respect, he claims for the general government more power than the gentleman from Virginia assigns to it. And I must own, that I so far coincide with the gentleman from Virginia. If the power can be traced to no more legitimate source than to that of appropriating the public treasure, I yield the question.

The truth is, that there is no specific grant, in the constitution, of the power of appropriation: nor was any such requisite. It is a resulting power. The constitution vests in Congress the power of taxation, with but few limitations, to raise a public revenue. It then enumerates the powers of Congress. And it follows, of necessity, that Congress has the right to apply the money, so raised, to the execution of the powers so granted. The clause, which concludes the enumeration of the granted powers, by authorizing the passage of all laws, "necessary and proper" to effectuate them, comprehends the power of appropriation. And the framers of the constitution recognize it by the restriction, that no money shall be drawn from the treasury but in virtue of a previous appropriation by law. It is to me wonderful how the President should have brought his mind to the conclusion, that, under the power of appropriation, thus incidentally existing, a right could be set up, in its nature almost without limitation, to employ the public money. He combats with great success and much ability, any deduction of power from the clause relating to the general welfare. He shows that the effect of it would be to overturn, or render useless and nugatory, the careful enumeration of our powers; and that it would convert a cautiously limited government into one without limitation. The same process of reasoning by which his mind was brought to this just conclusion, one would have thought, should have warned him against his claiming, under the power of appropriation, such a vast latitude of authority. He reasons strongly against the power, as claimed by us, harmless and beneficent and limited, as it must be admitted to be, and yet he sets up a power boundless in its extent, unrestrained to the object of internal improvements, and comprehending the whole scope of human affairs! For, if the power exists, as he asserts it, what human restraint is there upon it? He does, indeed, say, that it cannot be exerted so as to interfere with the territorial jurisdiction of the states. But this is a restriction altogether gratuitous, flowing from the bounty of the President, and not found in the prescriptions of the Constitution. If we have a right, indefinitely, to apply the money of the government to internal improvements, or to any other object, what is to prevent the application of it to the purchase of the sovereignty itself, of a State, if a State were mean enough to sell its sovereignty—to the purchase of kingdoms, empires, the globe itself? With an almost unlimited power of taxation; and, after the revenue is raised, with a right to apply it under no other limitations than those which the President's caution has suggested, I

cannot see what other human power is needed. It has been said, by Cæsar or Bonaparte, no doubt thought by both, that, with soldiers enough, they could get money enough; and, with money enough, they could command soldiers enough. According to the President's interpretation of the Constitution, one of these great levers of public force and power is possessed by this government. The President seems to contemplate, as fraught with much danger, the power, humbly as it is claimed, to effect the internal improvement of the country. And, in his attempt to overthrow it, sets up one of infinitely greater magnitude. The quantum of power which we claim over the subject of internal improvement is, it is true, of greater amount and force than that which results from the President's view of the Constitution: but then it is limited to the object of internal improvements; whilst the power set up by the President has no such limitation; and, in effect, as I conceive, has no limitation whatever, but that of the ability of the people to bear taxation.

With the most profound respect for the President, and after the most deliberate consideration of his argument, I cannot agree with him. I cannot think that any political power accrues to this government, from the mere authority which it possesses to appropriate the public revenue. The power to make internal improvements draws after it most certainly the right to appropriate money to consummate the object. But I cannot conceive that this right of appropriation draws after it the power of internal improvements. The appropriation of money is consequence, not cause. It follows, it does not precede. According to the order of nature, we first determine upon the object to be accomplished, and then we appropriate the money necessary to its consummation. According to the order of the Constitution, the power is defined, and the application, that is, the appropriation of the money requisite to its effectuation, follows as a necessary and proper means. The practice of congressional legislation is conformable to both. We first inquire what we may do, and provide by law for its being done, and we then appropriate, by another act of legislation, the money necessary to accomplish the specified object. The error of the argument lies in its beginning too soon. It supposes the money to be in the treasury, and then seeks to disburse it. But how came it there? Congress cannot impose taxes without an object. Their imposition must be in reference to the whole mass of our powers, to the general purposes of government, or with the view to the fulfilment of some one of those powers, or to the attainment of

some one of those purposes. In either case, we consult the Constitution, and ascertain the extent of the authority which is confided to us. We cannot constitutionally lay the taxes without regard to the extent of our powers; and then, having acquired the money of the public, appropriate it, because we have got it, to any object indefinitely.

Nor do I claim the power in question, from the consent or grant of any particular State or States, through which an object of internal improvement may pass. It may, indeed, be prudent to consult a State through which such an improvement may happen to be carried, from considerations of deference and respect to its sovereign power; and from a disposition to maintain those relations of perfect amity which are ever desirable between the general and State governments. But the power to establish the improvement must be found in the Constitution, or it does not exist. And what is granted by all, it cannot be necessary to obtain the consent of some to perform.

The gentleman from Virginia, in speaking of incidental powers, used a species of argument which I entreat him candidly to reconsider. He said that the chain of cause and effect was without end; that if we argued from a power expressly granted to all others, which might be convenient or necessary to its execution, there were no bounds to the power of this government; that, for example, under the power "to provide and maintain a navy," the right might be assumed to the timber necessary to its construction, and the soil on which it grew. The gentleman might have added, the acorns from which it sprung. What, upon the gentleman's own hypothesis, ought to have been his conclusion? That Congress possessed no power to provide and maintain a navy. Such a conclusion would have been quite as logical, as that Congress has no power over internal improvements, from the possible lengths to which this power may be pushed. No one ever has, or can, controvert the existence of incidental powers. We may apply different rules for their extraction, but all must concur in the necessity of their actual existence. They result from the imperfections of our nature, and from the utter impossibility of foreseeing all the turns and vicissitudes in human affairs. They cannot be defined. Much is attained when the power, the end, is specified and guarded. Keeping that constantly in view, the means necessary to its attainment must be left to the sound and responsible discretion of the public functionary. Intrench him as you please, employ what language you may, in the constitutional instrument, "necessary and proper," "indispensably necessary," or any

other, and the question is still left open—does the proposed measure fall within the scope of the incidental power, circumscribed as it may be? Your safety against abuse must rest in his interest, his integrity, his responsibility to the exercise of the elective franchise; finally, in the ultimate right, when all other redress fails, of an appeal to the remedy, to be used only in extreme cases, of forcible resistance against intolerable oppression.

Doubtless, by an extravagant and abusive enlargement of incidental powers, the State governments may be reduced within too narrow limits. Take any power, however incontestably granted to the general government, and employ that kind of process of reasoning in which the gentleman from Virginia is so skilful, by tracing it to its remotest effects, you may make it absorb the powers of the State governments. Pursue the opposite course; take any incontestable power belonging to the State governments, and follow it out into all its possible ramifications, and you may make it thwart and defeat the great operations of the government of the whole. This is the consequence of our systems. Their harmony is to be preserved only by forbearance, liberality, practical good sense, and mutual concession. Bring these dispositions into the administrations of our various institutions, and all the dreaded conflicts of authorities will be found to be perfectly imaginary.

I disclaim, for myself, several sources to which others have ascended, to arrive at the power in question. In making this disclaimer, I mean to cast no imputation on them. I am glad to meet them by whatever road they travel, at the point of a constitutional conclusion. Nor do their positions weaken mine; on the contrary, if correctly taken, and mine also are justified by fair interpretation, they add strength to mine. But I feel it my duty, frankly and sincerely, to state my own views of the Constitution. In coming to the ground on which I make my stand to maintain the power, and where I am ready to meet its antagonist, I am happy, in the outset, to state my hearty concurrence with the gentleman from Virginia, in the old 1798 republican principles (now become federal also), by which the Constitution is to be interpreted. I agree with him that this is a limited government; that it has no powers but the granted powers; and that the granted powers are those which are expressly enumerated, or such as, being implied, are necessary and proper to effectuate the enumerated powers. And, if I do not show the power over federative, national, internal improvements, to be fairly deducible, after the strictest application of these principles,

I entreat the committee unanimously to reject the bill. The gentleman from Virginia has rightly anticipated that, in regard to roads, I claim the power, under the grant, to establish postoffices and post roads. The whole question, on this part of the subject, turns upon the true meaning of this clause, and that again upon the genuine signification of the word "establish." According to my understanding of it, the meaning of it is, to fix, to make firm, to build. According to that of the gentleman from Virginia, it is to designate, to adopt. Grammatical criticism was to me always unpleasant, and I do not profess to be any proficient in it. But I will confidently appeal, in support of my definition, to any vocabulary whatever, of respectable authority, and to the common use of the word. That it cannot mean only adoption, is to me evident; for adoption presupposes establishment, which is precedent in its very nature. That which does not exist, which is not established, cannot be adopted. There is, then, an essential difference between the gentleman from Virginia and me. I consider the power as original and creative; he as derivative, adoptive. But I will show, out of the mouth of the President himself, who agrees with the gentleman from Virginia, as to the sense of this word, that what I contend for is its genuine meaning. The President, in almost the first lines of his message to this House, of the fourth of May, 1822, returning the Cumberland bill with his veto, says, "a power to establish turnpikes, with gates and tolls, etc., implies a power to adopt and execute a complete system of internal improvement." What is the sense in which the word "establish" is here used? Is it not creative? Did the President mean to adopt or designate some pre-existing turnpikes, with gates, etc., or, for the first time, to set them up, under the authority of Congress? Again, the President says, "if it exist as to one road [that is, the power to lay duties of transit, and to take the land on a valuation], it exists as to any other, and to as many roads as Congress may think proper to 'establish.'" In what sense does he here employ the word? The truth is, that the President could employ no better than the constitutional word, and he is obliged to use it in the precise sense for which I contend. But I go to a higher authority than that of the chief magistrate—to that of the Constitution itself. In expounding that instrument, we must look at all its parts; and if we find a word, the meaning of which it is desirable to obtain, we may safely rest upon the use which has been made of the same word in other parts of the instrument. The word "establish" is one of frequent recurrence in the Constitution; and I venture to say that it will be found uniformly

to express the same idea. In the clause enumerating our powers, Congress has power "to establish a uniform rule of naturalization," etc. In the preamble, "We, the people of the United States, in order to form a more perfect union, establish justice, etc., do ordain and establish this Constitution," etc. What pre-existing code of justice was adopted? Did not the people of the United States, in this high, sovereign act, contemplate the construction of a code adapted to their federal condition? The sense of the word, as contended for, is self-evident, when applied to the Constitution.

But let us look at the nature, object and purposes of the power. The trust confided to Congress was one of the most beneficial character. It was the diffusion of information among all the parts of this republic. It was the transmission and circulation of intelligence; it was to communicate knowledge of the laws and acts of government; and to promote the great business of society in all its relations. This was a great trust, capable of being executed in a highly salutary manner. It could be executed only by Congress, and it should be as well performed as it could be, considering the wants and exigencies of government. And here I beg leave to advert to the principle which I some time ago laid down, that the powers granted to this government are to be carried into execution by its own inherent force and energy, without necessary dependence upon the State governments. If my construction secures this object; and if that of my opponents places the execution of this trust at the pleasure and mercy of the State governments, we must reject theirs and assume mine. But the construction of the President does not make it so dependent. He contends that we can only use, as post-roads, those which the States shall have previously established; that they are at liberty to alter, to change, and of course to shut them up at pleasure. It results from this view of the President that any of the great mail routes now existing, that, for example, from south to north, may be closed at pleasure or by caprice, by any one of the States, or its authorities, through which it passes—by that of Delaware or any other. Is it possible that that construction of the Constitution can be correct, which allows a law of the United States, enacted for the good of the whole, to be obstructed or defeated in its operation by any one of twenty-four sovereignties? The gentleman from Virginia, it is true, denies the right of a State to close a road which has been designated as a post-road. But suppose the State, no longer having occasion to use it for its own separate and peculiar purposes, withdraws all care and

attention from its preservation. Can the State be compelled to repair it? No! the gentleman from Virginia must say, and I will say—may not the general government repair this road which is abandoned by the State power? May it not repair it in the most efficacious manner? And may it not protect and defend that which it has thus repaired, and which there is no longer an interest or inclination in the State to protect and defend? Or does the gentleman mean to contend that a road may exist in the statute book, which a State will not, and the general government cannot, repair and improve? And what sort of an account should we render to the people of the United States, of the execution of the high trust confided, for their benefit, to us, if we were to tell them that we had failed to execute it, because a State would not make a road for us?

JOHN MARSHALL

JOHN MARSHALL was born at Germantown, Virginia, September 24, 1755. He was the eldest of fifteen children. He never attended college, but was well educated by his father. During the Revolution he served as a captain, and in 1781 began to practice law. He was chosen a member of the Virginia House of Delegates in 1782.

When the question of adopting the new constitution came up Marshall earned his first fame by the powerful speeches he made in favor of a National Union. With the election of Washington he became one of the most prominent of the Federal leaders. He served in Congress in 1799, and in 1800 was appointed Secretary of State by President Adams. He was made Chief Justice in 1801 and served until his death in July, 1835.

Under his influence the Supreme Court gradually came to assume the commanding position it now occupies, and his decisions did more to strengthen the National power than all the contemporary years of a State-sovereignty, Republican rule could do to awaken.

In 1803 in the case of Marbury vs. Madison he decided that the constitution is, contrary to the case in England, superior to any legislative act and that it is the duty of the judicial department to decide on occasion whether a law be constitutional. In the case of the United

States vs. Judge Peters in 1809, he decided that the federal laws are superior to those of a state and the federal judiciary superior to either a state court or legislature. In the case of M'Culloch vs. The State of Maryland (1819), he developed the doctrine of implied powers, supported the constitutionality of the National Bank and denied the right of a state to interfere with the execution of national laws. In 1821 in the case of Cohens vrs. The State of Virginia, he decided that the fact that a state is a party brings the case under the jurisdiction of the Supreme Court. It was in this case that he developed especially the idea that the United States Supreme Court is the final arbiter in all questions between two states or between any state and the national government. Such were the great principles he developed. They have become the foundation of our present conception of the nation and together with his other less public rulings have made him probably the equal of any constitutional justice the world has ever known.

THE SUPREME COURT SUPERIOR TO STATE LEGISLATURES

The United States vs. Judge Peters
February Term, 1809

[5 Cranch's Reports, 115-141.]

The United States district court for the district of Pennsylvania gave, in a certain admiralty case, sentence in favor of Gideon Olmstead and others against Elizabeth Serjeant and Esther Waters. A copy of this sentence was served on said Serjeant and Waters, which they refused to obey. Judge Peters of the district court was then applied to for a process which should enforce obedience, but this he would not grant. At the February term of 1808 the supreme court was applied to for a rule to the said judge, requiring him to show cause why a mandamus should not issue commanding him to grant the desired process. He made a return stating that the legislature of Pennsylvania had passed an act to protect Elizabeth Serjeant and Esther Waters against the process of any United States court issued under the suits in question, that he was unwilling to embroil the United States with Pennsylvania, and refused to grant the process in order to bring the case before the supreme court.

On the 20th of February Chief Justice Marshall delivered the

opinion of the court; and as he gives the leading facts in this very complicated case, we need only say further that Serjeant and Waters were the executrixes of Rittenhouse, referred to. The opinion was in these words:—

With great attention, and with serious concern, the court has considered the return made by the judge for the district of Pennsylvania to the mandamus directing him to execute the sentence pronounced by him in the case of Gideon Olmstead and others vs. Rittenhouse's Executrixes, or to show cause for not so doing. The cause shown is an act of the legislature of Pennsylvania, passed subsequent to the rendition of this sentence. This act authorizes and requires the governor to demand, for the use of the state of Pennsylvania, the money which had been decreed to Gideon Olmstead and others, and which was in the hands of the executrixes of David Rittenhouse; and in default of payment, to direct the attorney general to institute a suit for the recovery thereof. This act further authorizes and requires the governor to use any further means he may think necessary for the protection of what it denominates "the just rights of the state," and also to protect the persons and properties of the said executrixes of David Rittenhouse, deceased, against any process whatever issued out of any federal court in consequence of their obedience to the requisition of the said act.

If the legislatures of the several states may at will annul the judgments of the courts of the United States, and destroy the right acquired under those judgments, the Constitution itself becomes a solemn mockery, and the nation is deprived of the means of enforcing its laws by the instrumentality of its own tribunals. So fatal a result must be deprecated by all; and the people of Pennsylvania, not less than the citizens of every other state, must feel a deep interest in resisting principles so destructive of the Union, and in averting consequences so fatal to themselves.

The act in question does not, in terms, assert the universal right of the state to interpose in every case whatever; but assigns, as a motive for its interposition in this particular case, that the sentence, the execution of which it prohibits, was rendered in a cause over which the federal courts have no jurisdiction.

If the ultimate right to determine the jurisdiction of the courts of the Union is placed by the Constitution in the several state legislatures, then this act concludes the subject; but if that power necessarily resides in the supreme judicial tribunal of the nation, then the jurisdic-

tion of the district court of Pennsylvania over the case in which that jurisdiction was exercised ought to be most deliberately examined; and the act of Pennsylvania, with whatever respect it may be considered, cannot be permitted to prejudice the question.

NATIONAL LAW SUPERIOR TO STATE LAW, AND THE DOCTRINE OF IMPLIED POWERS

M'Culloch vs. The State of Maryland and Others
February Term, 1819

[Wheaton's Reports, 316-437.]

In April, 1816, the Congress of the United States incorporated the Bank of the United States. In 1817 a branch of this bank was placed at Baltimore, Maryland. In 1818 the legislature of Maryland passed a law to tax "all banks or branches thereof, in the state of Maryland, not chartered by the legislature." The branch of the United States bank did not pay this tax, and McCulloch, the cashier, was sued by John James, for himself and the state of Maryland, according to the provisions of the act imposing the tax. Judgment being given in the state courts against McCulloch, he brought it before the supreme court, the opinion of which was delivered by the chief justice on the 7th of March, 1819, as follows:

In the case now to be determined, the defendant, a sovereign state, denies the obligation of a law enacted by the legislature of the Union, and the plaintiff, on his part, contests the validity of an act which has been passed by the legislature of that state. The Constitution of our country, in its most interesting and vital part, is to be considered; the conflicting powers of the government of the Union and of its members, as marked in that Constitution, are to be discussed; and an opinion given which may essentially influence the great operations of the government. No tribunal can approach such a question without a deep sense of its importance, and of the awful responsibility involved in its decision. But it must be decided peacefully or remain a source of hostile legislation, perhaps of hostility of a still more serious nature; and if it is to be so decided, by this tribunal alone can the decision be made. On the supreme court of the United States has the Constitution of our country devolved this important duty.

The first question made in the cause is, Has Congress power to incorporate a bank?

It has been truly said that this can scarcely be considered as an open question, entirely unprejudiced by the former proceedings of the nation respecting it. The principle now contested was introduced at a very early period of our history, has been recognized by many successive legislatures, and has been acted upon by the judicial department, in cases of peculiar delicacy, as a law of undoubted obligation.

It will not be denied that a bold and daring usurpation might be resisted, after an acquiescence still longer and more complete than this. But it is conceived that a doubtful question—one on which human reason may pause and the human judgment be suspended, in the decision of which the great principles of liberty are not concerned, but the respective powers of those who are equally the representatives of the people are to be adjusted—if not put at rest by the practice of the government, ought to receive a considerable impression from that practice. An exposition of the Constitution, deliberately established by legislative acts, on the faith of which an immense property has been advanced, ought not to be lightly disregarded.

The power now contested was exercised by the first Congress elected under the present Constitution. The bill for incorporating the Bank of the United States did not steal upon an unsuspecting legislature, and pass unobserved. Its principle was completely understood, and was opposed with equal zeal and ability. After being resisted, first in the fair and open field of debate, and afterwards in the executive cabinet, with as much persevering talent as any measure has ever experienced, and being supported by arguments which convinced minds as pure and as intelligent as this country can boast, it became a law. The original act was permitted to expire; but a short experience of the embarrassments to which the refusal to revive it exposed the government, convinced those, who were most prejudiced against the measure, of its necessity, and induced the passage of the present law. It would require no ordinary share of intrepidity to assert that a measure adopted under these circumstances was a bold and plain usurpation, to which the Constitution gave no countenance.

These observations belong to the cause; but they are not made under the impression that, were the question entirely new, the law would be found irreconcilable with the Constitution.

In discussing this question, the counsel for the state of Maryland

have deemed it of some importance, in the construction of the Constitution, to consider that instrument not as emanating from the people, but as the act of sovereign and independent states. The powers of the general government, it has been said, are delegated by the states, who alone are truly sovereign; and must be exercised in subordination to the states, who alone possess supreme dominion.

It would be difficult to sustain this proposition. The convention which framed the Constitution was indeed elected by the state legislatures. But the instrument, when it came from their hands, was a mere proposal, without obligation, or pretensions to it. It was reported to the then existing Congress of the United States, with a request that it might "be submitted to a convention of delegates, chosen in each state by the people thereof, under the recommendation of its legislature, for their assent and ratification." This mode of proceeding was adopted; and by the convention, by Congress, and by the state legislatures, the instrument was submitted to the people. They acted upon it in the only manner in which they can act safely, effectively, and wisely, on such a subject, by assembling in convention. It is true, they assembled in their several states—and where else should they have assembled? No political dreamer was ever wild enough to think of breaking down the lines which separate the states, and of compounding the American people into one common mass. Of consequence, when they act, they act in their states. But the measures they adopt do not, on that account, cease to be the measures of the people themselves, or become the measures of the state governments.

From these conventions the Constitution derives its whole authority. The government proceeds directly from the people; is "ordained and established" in the name of the people; and is declared to be ordained "in order to form a more perfect union, establish justice, ensure domestic tranquility, and secure the blessings of liberty to themselves and to their posterity." The assent of the states in their sovereign capacity is implied in calling a convention, and thus submitting that instrument to the people. But the people were at perfect liberty to accept or reject it; and their act was final. It required not the affirmance, and could not be negatived by the state governments. The Constitution, when thus adopted, was of complete obligation, and bound the state sovereignties.

It has been said that the people had already surrendered all their powers to the state sovereignties, and had nothing more to give. But

surely the question, whether they may resume and modify the powers granted to government, does not remain to be settled in this country. Much more might the legitimacy of the general movement be doubted, had it been created by the states. The powers delegated to the state sovereignties were to be exercised by themselves, not by a distinct and independent sovereignty, created by themselves. To the formation of a league, such as was the confederation, the state sovereignties were certainly competent. But when, "in order to form a more perfect union," it was deemed necessary to change this alliance into an effective government, possessing great and sovereign powers, and acting directly on the people, the necessity of referring it to the people, and of deriving its powers directly from them, was felt and acknowledged by all.

The government of the union, then (whatever may be the influence of this fact on the case), is emphatically and truly a government of the people. In form and in substance it emanates from them. Its powers are granted by them, and are to be exercised directly on them, and for their benefit.

This government is acknowledged by all to be one of enumerated powers. The principle, that it can exercise only the powers granted to it, would seem too apparent to have required to be enforced by all those arguments which its enlightened friends, while it was depending before the people, found it necessary to urge. That principle is now universally admitted. But the question, respecting the extent of the powers actually granted, is perpetually arising, and will probably continue to arise as long as our system shall exist.

In discussing these questions, the conflicting powers of the general and state governments must be brought into view, and the supremacy of their respective laws, when they are in opposition, must be settled.

If any one proposition could command the universal assent of mankind, we might expect it would be this—that the government of the Union, though limited in its powers, is supreme within its sphere of action. This would seem to result necessarily from its nature. It is the government of all; its powers are delegated by all; it represents all, and acts for all. Though any one state may be willing to control its operations, no state is willing to allow others to control them. The nation, on those subjects on which it can act, must necessarily bind its component parts. But this question is not left to mere reason; the people have in express terms decided it by saying, "This Constitution, and the

laws of the United States which shall be made in pursuance thereof," "shall be the supreme law of the land," and by requiring that the members of the state legislatures, and the officers of the executive and judicial departments of the states, shall take the oath of fidelity to it.

The government of the United States, then, though limited in its powers, is supreme; and its laws, when made in pursuance of the Constitution, form the supreme law of the land, "anything in the Constitution or laws of any state to the contrary notwithstanding."

Among the enumerated powers we do not find that of establishing a bank, or creating a corporation. But there is no phrase in the instrument which, like the articles of confederation, excludes incidental or implied powers, and which requires that everything granted shall be expressly and minutely described. Even the tenth amendment, which was framed for the purpose of quieting the excessive jealousies which had been excited, omits the word "expressly," and declares only that the powers "not delegated to the United States, nor prohibited to the states, are reserved to the states, or to the people;" thus leaving the question, whether the particular power which may become the subject of contest has been delegated to the one government or prohibited to the other, to depend on a fair construction of the whole instrument. The men who drew and adopted this amendment had experienced the embarrassments resulting from the insertion of this word in the articles of confederation, and probably omitted it to avoid those embarrassments. A constitution, to contain an accurate detail of all the subdivisions of which its great powers will admit, and of all the means by which they may be carried into execution, would partake of the prolixity of a legal code, and could scarcely be embraced by the human mind. It would probably never be understood by the public. Its nature therefore requires that only its great outlines should be marked, its important objects designated, and the minor ingredients which compose those objects be deduced from the nature of the objects themselves. That this idea was entertained by the framers of the American Constitution is not only to be inferred from the nature of the instrument, but from the language. Why else were some of its limitations, found in the ninth section of the first article, introduced? It is also in some degree warranted by their having omitted to use any restrictive term which might prevent its receiving a fair and just interpretation. In considering this question, then, we must never forget that it is a constitution we are expounding.

Although, among the enumerated powers of government, we do not find the word "bank" or "incorporation," we find the great powers to lay and collect taxes, to borrow money, to regulate commerce, to declare and conduct a war, and to raise and support armies and navies. The sword and the purse, all the external relations, and no inconsiderable portion of the industry of the nation, are entrusted to its government. It can never be pretended that these vast powers draw after them others of inferior importance, merely because they are inferior. Such an idea can never be advanced. But it may with great reason be contended that a government entrusted with such ample powers, on the due execution of which the happiness and prosperity of the nation so vitally depend, must also be entrusted with ample means for their execution. The power being given, it is the interest of the nation to facilitate its execution. It can never be their interest, and cannot be presumed to have been their intention, to clog and embarrass its execution by withholding the most appropriate means. Throughout this vast republic, from the St. Croix to the Gulf of Mexico, from the Atlantic to the Pacific, revenue is to be collected and expended, armies are to be marched and supported. The exigencies of the nation may require that the treasure raised in the North should be transported to the South, that raised in the East be conveyed to the West, or that this order should be reversed. Is that construction of the Constitution to be preferred which would render these operations difficult, hazardous, and expensive? Can we adopt that construction (unless the words imperiously require it) which would impute to the framers of that instrument, when granting these powers for the public good, the intention of impeding their exercise by withholding a choice of means? If, indeed, such be the mandate of the Constitution, we have only to obey; but that instrument does not profess to enumerate the means by which the powers it confers may be executed; nor does it prohibit the creation of a corporation, if the existence of such a being be essential to the beneficial exercise of those powers. It is, then, the subject of fair inquiry, how far such means may be employed.

It is not denied that the powers given to the government imply the ordinary means of execution. That, for example, of raising revenue, and applying it to national purposes, is admitted to imply the power of conveying money from place to place, as the exigencies of the nation may require, and of employing the usual means of conveyance. But it is denied that the government has its choice of means, or that it

may employ the most convenient means, if to employ them it be necessary to erect a corporation.

On what foundation does this argument rest? On this alone: The power of creating a corporation is one appertaining to sovereignty, and is not expressly conferred on Congress. This is true. But all legislative powers appertain to sovereignty. The original power of giving the law on any subject whatever is a sovereign power; and if the government of the Union is restrained from creating a corporation, as a means for performing its functions, on the single reason that the creation of a corporation is an act of sovereignty; if the sufficiency of this reason be acknowledged, there would be some difficulty in sustaining the authority of Congress to pass other laws for the accomplishment of the same objects.

The government which has a right to do an act, and has imposed on it the duty of performing that act, must, according to the dictates of reason, be allowed to select the means; and those who contend that it may not select any appropriate means, that one particular mode of effecting the object is excepted, take upon themselves the burden of establishing that exception.

The creation of a corporation, it is said, appertains to sovereignty. This is admitted. But to what portion of sovereignty does it appertain? Does it belong to one more than to another? In America the powers of sovereignty are divided between the government of the Union and those of the states. They are each sovereign with respect to the objects committed to it, and neither sovereign with respect to the objects committed to the other. We cannot comprehend that train of reasoning which would maintain that the extent of power granted by the people is to be ascertained not by the nature and terms of the grant, but by its date. Some state constitutions were formed before, some since that of the United States. We cannot believe that their relation to each other is in any degree dependent upon this circumstance. Their respective powers must, we think, be precisely the same as if they had been formed at the same time. Had they been formed at the same time, and had the people conferred on the general government the power contained in the Constitution, and on the states the whole residuum of power, would it have been asserted that the government of the Union was not sovereign with respect to those objects which were entrusted to it, in relation to which its laws were declared to be supreme? If this could not have been asserted, we cannot well comprehend the pro-

cess of reasoning which maintains that a power appertaining to sovereignty cannot be connected with the vast portion of it which is granted to the general government, so far as it is calculated to subserve the legitimate objects of that government. The power of creating a corporation, though appertaining to sovereignty, is not like the power of making war, or levying taxes, or of regulating commerce, a great substantive and independent power, which cannot be implied as incidental to other powers, or used as a means of executing them. It is never the end for which other powers are exercised, but the means by which their objects are accomplished. No contributions are made to charity for the sake of incorporation, but a corporation is created to administer the charity; no seminary of learning is instituted in order to be incorporated, but the corporate character is conferred to subserve the purposes of education. No city was ever built with the sole object of being incorporated, but is incorporated as the best means of being well governed. The power of creating a corporation is never used for its own sake, but for the purpose of effecting something else. No sufficient reason is therefore perceived, why it may not pass as incidental to those powers which are expressly given, if it be a direct mode of executing them.

But the Constitution of the United States has not left the right of Congress to employ the necessary means for the execution of the powers conferred on the government to general reasoning. To its enumeration of powers is added that of making "all laws which shall be necessary and proper for carrying into execution the foregoing powers, and all other powers vested by this Constitution in the government of the United States, or in any department thereof."

The counsel for the state of Maryland have urged various arguments to prove that this clause, though in terms a grant of power, is not so in effect; but is really restrictive of the general right, which might otherwise be implied, of selecting means for executing the enumerated powers.

In support of this proposition, they have found it necessary to contend that this clause was inserted for the purpose of conferring on Congress the power of making laws; that without it doubts might be entertained whether Congress could exercise its powers in the form of legislation.

But could this be the object for which it was inserted? A government is created by the people, having legislative, executive, and judicial

powers. Its legislative powers are vested in a congress, which is to consist of a senate and house of representatives. Each house may determine the rule of its proceedings; and it is declared that every bill which shall have passed both houses shall, before it becomes a law, be presented to the President of the United States. The seventh section describes the course of proceedings by which a bill shall become a law; and then the eighth section enumerates the powers of Congress. Could it be necessary to say that a legislature should exercise legislative powers in the shape of legislation? After allowing each house to prescribe its own course of proceeding, after describing the manner in which a bill should become a law, would it have entered into the mind of a single member of the convention that an express power to make laws was necessary to enable the legislature to make them? That a legislature endowed with legislative powers can legislate, is a proposition too self-evident to have been questioned.

But the argument on which most reliance is placed is drawn from the peculiar language of this clause. Congress is not empowered by it to make all laws which may have relation to the powers conferred on the government, but such only as may be "necessary and proper" for carrying them into execution. The word "necessary" is considered as controlling the whole sentence, and as limiting the right to pass laws, for the execution of the granted powers, to such as are indispensable, and without which the power would be nugatory; that it excludes the choice of means, and leaves to Congress, in each case, that only which is most direct and simple.

Is it true that this is the sense in which the word "necessary" is always used? Does it always import an absolute, physical necessity, so strong that one thing, to which another may be termed necessary, cannot exist without that other? We think it does not. If reference be had to its use in the common affairs of the world, or in approved authors, we find that it frequently imports no more than that one thing is convenient, or useful, or essential to another. To employ the means necessary to an end is generally understood as employing any means calculated to produce the end, and not as being confined to those single means without which the end would be entirely unattainable. Such is the character of human language that no word conveys to the mind, in all situations, one single definite idea; and nothing is more common than to use words in a figurative sense. Almost all compositions contain words which, taken in their rigorous sense, would convey a mean-

ing different from that which is obviously intended. It is essential to just construction that many words which import something excessive should be understood in a more mitigated sense—in that sense which common usage justifies. The word "necessary" is of this description. It has not a fixed character peculiar to itself. It admits of all degrees of comparison; and is often connected with other words which increase or diminish the impression the mind receives of the urgency it imports. A thing may be necessary, very necessary, absolutely or indispensably necessary. To no mind would the same idea be conveyed by these several phrases. This comment on the word is well illustrated by the passage cited at the bar from the tenth section of the first article of the Constitution. It is, we think, impossible to compare the sentence, which prohibits a state from laying "imposts, or duties on imports or exports, except what may be absolutely necessary for executing its inspection laws," with that which authorizes Congress "to make all laws which shall be necessary and proper for carrying into execution" the powers of the general government, without feeling a conviction that the convention understood itself to change materially the meaning of the word "necessary," by prefixing the word "absolutely." This word, then, like others, is used in various senses; and in its construction, the subject, the context, the intention of the person using them, are all to be taken into view.

Let this be done in the case under consideration. The subject is the execution of those great powers on which the welfare of a nation essentially depends. It must have been the intention of those who gave these powers, to insure as far as human prudence could insure, their beneficial execution. This could not be done by confiding the choice of means to such narrow limits as not to leave it in the power of Congress to adopt any which might be appropriate and which were conducive to the end. This provision is made in a constitution intended to endure for ages to come, and consequently to be adapted to the various crises of human affairs. To have prescribed the means by which government should in all future time execute its powers would have been to change entirely the character of the instrument, and give it the properties of a legal code. It would have been an unwise attempt to provide, by immutable rules, for exigencies which, if foreseen at all, must have been seen dimly, and which can be best provided for as they occur. To have declared that the best means shall not be used, but those alone without which the power given would be nugatory, would have been to deprive

the legislature of the capacity to avail itself of experience to exercise its reason, and to accommodate its legislation to circumstances. If we apply this principle of construction to any of the powers of the government, we shall find it so pernicious in its operation that we shall be compelled to discard it. The powers vested in Congress may certainly be carried into execution without prescribing an oath of office. The power to exact this security for the faithful performance of duty is not given, nor is it indispensably necessary. The different departments may be established, taxes may be imposed and collected, armies and navies may be raised and maintained, and money may be borrowed, without requiring an oath of office. It might be argued, with as much plausibility as other incidental powers have been assailed, that the convention was not unmindful of this subject. The oath which might be exacted—that of fidelity to the Constitution—is prescribed, and no other can be required. Yet he would be charged with insanity who should contend that the legislature might not superadd to the oath directed by the Constitution such other oath of office as its wisdom might suggest.

So with respect to the whole penal code of the United States; whence arises the power to punish in cases not prescribed by the Constitution? All admit that the government may legitimately punish any violation of its laws; and yet this is not among the enumerated powers of Congress. The right to enforce the observance of law, by punishing its infraction, might be denied with the more plausibility, because it is expressly given in some cases. Congress is empowered "to provide for the punishment of counterfeiting the securities and current coin of the United States," and "to define and punish piracies and felonies committed on the high seas, and offenses against the law of nations." The several powers of Congress may exist, in a very imperfect state to be sure, but they may exist and be carried into execution, although no punishment should be inflicted in cases where the right to punish is not expressly given.

Take, for example, the power "to establish postoffices and post-roads." This power is executed by the single act of making the establishment. But from this has been inferred the power and duty of carrying the mail along the post-road, from one postoffice to another. And from this implied power has again been inferred the right to punish those who steal letters from the postoffice, or rob the mail. It may be said, with some plausibility, that the right to carry the mail, and to punish those who rob it, is not indispensably necessary to the estab-

lishment of a postoffice and post-road. This right is, indeed, essential to the beneficial exercise of the power, but not indispensably necessary to its existence. So of the punishment of the crimes of stealing or falsifying a record or process of a court of the United States, or of perjury in such court. To punish these offenses is certainly conducive to the due administration of justice. But courts may exist, and may decide the causes brought before them, though such crimes escape punishment.

The baneful influence of this narrow construction on all the operations of the government, and the absolute impracticability of maintaining it without rendering the government incompetent to its great objects, might be illustrated by numerous examples drawn from the Constitution and from our laws. The good sense of the public has pronounced, without hesitation, that the power of punishment appertains to sovereignty, and may be exercised whenever the sovereign has a right to act, as incidental to his constitutional powers. It is a means for carrying into execution all sovereign powers, and may be used, although not indispensably necessary. It is a right incidental to the power, and conducive to its beneficial exercise.

If this limited construction of the word "necessary" must be abandoned in order to punish, whence is derived the rule which would reinstate it, when the government would carry its powers into execution by means not vindictive in their nature? If the word "necessary" means "needful," "requisite," "essential," "conducive to," in order to let in the power of punishment for the infraction of law, why is it not equally comprehensive when required to authorize the use of means which faciliate the execution of the powers of government without the infliction of punishment?

In ascertaining the sense in which the word "necessary" is used in this clause of the Constitution, we may derive some aid from that with which it is associated. Congress shall have power "to make all laws which shall be necessary and proper to carry into execution" the powers of the government. If the word "necessary" was used in that strict and rigorous sense for which the counsel for the state of Maryland contend, it would be an extraordinary departure from the usual course of the human mind, as exhibited in composition, to add a word, the only possible effect of which is to qualify that strict and rigorous meaning; to present to the mind the idea of some choice of means of legislation

not straitened and compressed within the narrow limits for which the gentlemen contend.

But the argument, which most conclusively demonstrates the error of the construction contended for by the counsel for the state of Maryland, is founded on the intention of the convention, as manifested in the whole clause. To waste time and argument in proving that, without it, Congress might carry its powers into execution, would be not much less idle than to hold a lighted taper to the sun. As little can it be required to prove that, in the absence of this clause, Congress would have some choice of means; that it might employ those which in its judgment would most advantageously affect the object to be accomplished; that any means adapted to the end, any means which tended directly to the execution of the constitutional powers of the government, were in themselves constitutional. This clause, as construed by the state of Maryland, would abridge and almost annihilate this useful and necessary right of the legislature to select its means. That this could not be intended is, we should think, had it not been already controverted, too apparent for controversy. We think so for the following reasons:—

1st. The clause is placed among the powers of congress, not among the limitations on those powers.

2d. Its terms purport to enlarge, not to diminish, the powers vested in the government. It purports to be an additional power, not a restriction on those already granted. No reason has been or can be assigned for thus concealing an intention to narrow the discretion of the national legislature under words which purport to enlarge it. The framers of the constitution wished its adoption, and well knew that it would be endangered by its strength, not by its weakness. Had they been capable of using language which would convey to the eye one idea, and, after deep reflection, impress on the mind another, they would rather have disguised the grant of power than its limitation. If, then, their intention had been by this clause to restrain the free use of means which might otherwise have been implied, that intention would have been inserted in another place, and would have been expressed in terms resembling these: "In carrying into execution the foregoing powers, and all others," &c., "no laws shall be passed but such as are necessary and proper." Had the intention been to make this clause restrictive, it would unquestionably have been so in form as well as in effect.

The result of the most careful and attentive consideration be-

stowed upon this clause is, that, if it does not enlarge, it cannot be construed to restrain, the powers of congress, or to impair the right of the legislature to exercise its best judgment in the selection of measures to carry into execution the constitutional powers of the government. If no other motive for its insertion can be suggested, a sufficient one is found in the desire to remove all doubts respecting the right to legislate on that vast mass of incidental powers which must be involved in the constitution, if that instrument be not a splendid bawble.

We admit, as all must admit, that the powers of the government are limited, and that its limits are not to be transcended. But we think the sound construction of the constitution must allow to the national legislature that discretion, with respect to the means by which the powers it confers are to be carried into execution, which will enable that body to perform the high duties assigned to it, in the manner most beneficial to the people. Let the end be legitimate, let it be within the scope of the constitution, and all means, which are appropriate, which are plainly adapted to that end, which are not prohibited, but consist with the letter and spirit of the constitution, are constitutional.

That a corporation must be considered as a means not less usual, not of higher dignity, not more requiring a particular specification, than other means, has been sufficiently proved. If we look to the origin of corporations, to the manner in which they have been framed in that government from which we have derived most of our legal principles and ideas, or to the uses to which they have been applied, we find no reason to suppose that a constitution, omitting, and wisely omitting, to enumerate all the means for carrying into execution the great powers vested in government, ought to have specified this. Had it been intended to grant this power as one which should be distinct and independent, to be exercised in any case whatever, it would have found a place among the enumerated powers of the government. But being considered merely as a means, to be employed only for the purpose of carrying into execution the given powers, there could be no motive for particularly mentioning it.

The propriety of this remark would seem to be generally acknowledged by the universal acquiescence in the construction which has been uniformly put on the third section of the fourth article of the constitution. The power to "make all needful rules and regulations respecting the territory or other property belonging to the United States" is not more comprehensive than the power "to make all laws which shall be

necessary and proper for carrying into execution" the powers of the government. Yet all admit the constitutionality of a territorial government, which is a corporate body.

If a corporation may be employed indiscriminately with other means to carry into execution the powers of the government, no particular reason can be assigned for excluding the use of a bank, if required for its fiscal operations. To use one must be within the discretion of congress, if it be an appropriate mode of executing the powers of government. That it is a convenient, a useful, and essential instrument in the prosecution of its fiscal operations is not now a subject of controversy. All those who have been concerned in the administration of our finances have concurred in representing its importance and necessity; and so strongly have they been felt, that statesmen of the first class, whose previous opinions against it had been confirmed by every circumstance which can fix the human judgment, have yielded those opinions to the exigencies of the nation. Under the confederation, congress, justifying the measure by its necessity, transcended, perhaps, its powers, to obtain the advantage of a bank; and our own legislation attests the universal conviction of the utility of this measure. The time has passed away when it can be necessary to enter into any discussion in order to prove the importance of this instrument, as a means to effect the legitimate objects of the government.

But were its necessity less apparent, none can deny its being an appropriate measure; and if it is, the degree of its necessity, as has been very justly observed, is to be discussed in another place. Should congress, in the execution of its powers, adopt measures which are prohibited by the constitution; or should congress, under the pretext of executing its powers, pass laws for the accomplishment of objects not entrusted to the government; it would become the painful duty of this tribunal, should a case requiring such a decision come before it, to say that such an act was not the law of the land. But where the law is not prohibited, and is really calculated to effect any of the objects entrusted to the government, to undertake here to inquire into the degree of its necessity would be to pass the line which circumscribes the judicial department, and to tread on legislative ground. This court disclaims all pretensions to such a power.

After this declaration it can scarcely be necessary to say that the existence of state banks can have no possible influence on the question. No trace is to be found in the constitution of an intention to create a

dependence of the government of the union on those of the states, for the execution of the great powers assigned to it. Its means are adequate to its ends; and on those means alone was it expected to rely for the accomplishment of its ends. To impose on it the necessity of resorting to means which it cannot control, which another government may furnish or withhold, would render its course precarious, the result of its measures uncertain, and create a dependence on other governments which might disappoint its most important designs, and is incompatible with the language of the constitution. But were it otherwise, the choice of means implies a right to choose a national bank in preference to state banks, and congress alone can make the election.

After the most deliberate consideration, it is the unanimous and decided opinion of this court that the act to incorporate the Bank of the United States is a law made in pursuance of the constitution, and is a part of the supreme law of the land.

The branches, proceeding from the same stock, and being conducive to the complete accomplishment of the object, are equally constitutional. It would have been unwise to locate them in the charter, and it would be unnecessarily inconvenient to employ the legislative power in making those subordinate arrangements. The great duties of the bank are prescribed; those duties require branches; and the bank itself may, we think, be safely trusted with the selection of places where those branches shall be fixed; reserving always to the government the right to require that a branch shall be located where it may be deemed necessary.

It being the opinion of the court that the act incorporating the bank is constitutional, and that the power of establishing a branch in the state of Maryland might be properly exercised by the bank itself, we proceed to inquire—

2. Whether the state of Maryland may, without violating the constitution, tax that branch?

That the power of taxation is one of vital importance; that it is retained by the states; that it is not abridged by the grant of a similar power to the government of the union; that it is to be concurrently exercised by the two governments; are truths which have never been denied. But such is the paramount character of the constitution that its capacity to withdraw any subject from the action of even this power is admitted. The states are expressly forbidden to lay any duties on imports or exports, except what may be absolutely necessary for executing their

inspection laws. If the obligation of this prohibition must be conceded,—if it may restrain a state from the exercise of its taxing power on imports and exports—the same paramount character would seem to restrain, as it certainly may restrain, a state from such other exercise of this power as is in its nature incompatible with and repugnant to the constitutional laws of the union. A law absolutely repugnant to another as entirely repeals that other as if express terms of repeal were used.

On this ground the counsel for the bank place its claim to be exempted from the power of a state to tax its operations. There is no express provision for the case, but the claim has been sustained on a principle which so entirely pervades the constitution, is so intermixed with the materials which compose it, so interwoven with its web, so blended with its texture, as to be incapable of being separated from it without rending it into shreds.

This great principle is, that the constitution and the laws made in pursuance thereof are supreme; that they control the constitution and laws of the respective states, and cannot be controlled by them. From this, which may be almost termed an axiom, other propositions are deduced as corollaries, on the truth or error of which, and on their application to this case, the cause has been supposed to depend. These are, 1st. That a power to create implies a power to reserve. 2d. That a power to destroy, if wielded by a different hand, is hostile to and incompatible with these powers to create and to preserve. 3d. That, where this repugnancy exists, that authority which is supreme must control, not yield to that over which it is supreme.

These propositions, as abstract truths, would, perhaps, never be controverted. Their application to this case, however, has been denied; and both in maintaining the affirmative and the negative, a splendor of eloquence, and strength of argument, seldom, if ever, surpassed, have been displayed.

The power of congress to create, and of course to continue, the bank, was the subject of the preceding part of this opinion, and is no longer to be considered as questionable.

That the power of taxing it by the states may be exercised so as to destroy it is too obvious to be denied. But taxation is said to be an absolute power, which acknowledges no other limits than those expressly prescribed in the constitution, and like sovereign power of every other description, is trusted to the discretion of those who use it. But the very terms of this argument admit that the sovereignty of the state,

in the article of taxation itself, is subordinate to and may be controlled by the constitution of the United States. How far it has been controlled by that instrument must be a question of construction. In making this construction no principle not declared can be admissible which would defeat the legitimate operations of a supreme government. It is of the very essence of supremacy to remove all obstacles to its action within its own sphere, and so to modify every power vested in subordinate governments as to exempt its own operations from their influence. This effect need not be stated in terms. It is so involved in the declaration of supremacy, so necessarily implied in it, that the expression of it could not make it more certain. We must, therefore, keep it in view while construing the constitution.

The argument on the part of the state of Maryland is, not that the states may directly resist a law of congress, but that they may exercise their acknowledged powers upon it, and that the constitution leaves them this right in the confidence that they will not abuse it.

Before we proceed to examine this argument, and to subject it to the test of the constitution, we must be permitted to bestow a few considerations on the nature and extent of this original right of taxation which is acknowledged to remain with the states. It is admitted that the power of taxing the people and their property is essential to the very existence of government, and may be legitimately exercised on the objects to which it is applicable, to the utmost extent to which the government may choose to carry it. The only security against the abuse of this power is found in the structure of the government itself. In imposing a tax the legislature acts upon its constituents. This is in general a sufficient security against erroneous and oppressive taxation.

The people of a state, therefore, give to their government a right of taxing themselves and their property; and as the exigencies of government cannot be limited, they prescribe no limits to the exercise of this right, resting confidently on the interest of the legislator, and on the influence of the constituents over their representative, to guard them against its abuse. But the means employed by the government of the union have no such security, nor is the right of a state to tax them sustained by the same theory. Those means are not given by the people of a particular state, not given by the constituents of the legislature which claim the right to tax them, but by the people of all the states. They are given by all, for the benefit of all, and upon theory should be subjected to that government only which belongs to all.

It may be objected to this definition that the power of taxation is not confined to the people and property of a state. It may be exercised upon every object brought within its jurisdiction.

This is true. But to what source do we trace this right? It is obvious that it is an incident of sovereignty, and is co-extensive with that to which it is an incident. All subjects over which the sovereign power of a state extends are objects of taxation; but those over which it does not extend are, upon the soundest principles, exempt from taxation. This proposition may almost be pronounced self-evident.

The sovereignty of a state extends to everything which exists by its own authority, or is introduced by its permission; but does it extend to those means which are employed by congress to carry into execution powers conferred on that body by the people of the United States? We think it demonstrable that it does not. Those powers are not given by the people of a single state. They are given by the people of the United States, to a government whose laws, made in pursuance of the constitution, are declared to be supreme. Consequently the people of a single state cannot confer a sovereignty which will extend over them.

If we measure the power of taxation residing in a state by the extent of sovereignty which the people of a single state possess and can confer on its government, we have an intelligible standard, applicable to every case to which the power may be applied. We have a principle which leaves the power of taxing the people and property of a state unimpaired; which leaves to a state the command of all its resources; and which places beyond its reach all those powers which are conferred by the people of the United States on the government of the union, and all those means which are given for the purpose of carrying those powers into execution. We have a principle which is safe for the states, and safe for the union. We are relieved, as we ought to be, from clashing sovereignty; from interfering powers; from a repugnancy between a right in one government to pull down what there is an acknowledged right in another to build up; from the incompatibility of a right in one government to destroy what there is a right in another to preserve. We are not driven to the perplexing inquiry, so unfit for the judicial department, What degree of taxation is the legitimate use, and what degree may amount to the abuse, of the power? The attempt to use it on the means employed by the government of the union, in pursuance of the constitution, is itself an abuse, because it is the usurpation of a power which the people of a single state cannot give.

We find, then, on just theory, a total failure of this original right to tax the means employed by the government of the union for the execution of its powers. The right never existed, and the question, whether it has been surrendered, cannot arise.

But, waiving this theory for the present, let us resume the inquiry, whether this power can be exercised by the respective states, consistently with a fair construction of the constitution.

That the power to tax involves the power to destroy; that the power to destroy may defeat and render useless the power to create; that there is a plain repugnance in conferring on one government a power to control the constitutional measures of another, which other, with respect to those very measures, is declared to be supreme over that which exerts the control, are propositions not to be denied. But all inconsistencies are to be reconciled by the magic of the word CONFIDENCE. Taxation, it is said, does not necessarily and unavoidably destroy. To carry it to the excess of destruction would be an abuse, to presume which would banish that confidence which is essential to all government.

But is this a case of confidence? Would the people of any one state trust those of another with a power to control the most insignificant operations of their state government? We know they would not. Why, then, should we suppose that the people of any one state should be willing to trust those of another with a power to control the operations of a government to which they have confided their most important and most valuable interests? In the legislature of the union alone are all represented. The legislature of the union alone, therefore, can be trusted by the people with the power of controlling measures which concern all, in the confidence that it will not be abused. This, then, is not a case of confidence, and we must consider it as it really is.

If we apply the principle for which the state of Maryland contends to the constitution generally, we shall find it capable of changing totally the character of that instrument. We shall find it capable of arresting all the measures of the government, and of prostrating it at the foot of the states. The American people have declared their constitution, and the laws made in pursuance thereof, to be supreme; but this principle would transfer the supremacy, in fact, to the states.

If the states may tax one instrument employed by the government in the execution of its powers, they may tax any and every other instrument. They may tax the mail; they may tax the mint; they may tax

patent rights; they may tax the papers of the custom-house; they may tax judicial process; they may tax all the means employed by the government, to an excess which would defeat all the ends of government. This was not intended by the American people. They did not design to make their government dependent on the states.

Gentlemen say they do not claim the right to extend state taxation to these objects. They limit their pretensions to property. But on what principle is this distinction made? Those who make it have furnished no reason for it, and the principle for which they contend denies it. They contend that the power of taxation has no other limit than is found in the tenth section of the first article of the constitution; that with respect to everything else the power of the states is supreme, and admits of no control. If this be true, the distinction between property and other subjects to which the power of taxation is applicable is merely arbitrary, and can never be sustained. This is not all. If the controlling power of the states be established; if their supremacy as to taxation be acknowledged; what is to restrain their exercising this control in any shape they may please to give it? Their sovereignty is not confined to taxation. That is not the only mode in which it might be displayed. The question is, in truth, a question of supremacy; and if the right of the states to tax the means employed by the general government be conceded, the declaration, that the constituiton, and the laws made in pursuance thereof, shall be the supreme law of the land, is empty and unmeaning declamation.

In the course of the argument "The Federalist" has been quoted; and the opinions expressed by the authors of that work have been justly supposed to be entitled to great respect in expounding the constitution. No tribute can be paid to them which exceeds their merit. But in applying their opinions to the cases which may arise in the progress of our government, a right to judge of their correctness must be retained; and to understand the argument, we must examine the proposition it maintains, and the objections against which it is directed. The subject of those numbers from which passages have been cited is the unlimited power of taxation which is vested in the general government. The objection to this unlimited power, which the argument seeks to remove, is stated with fullness and clearness. It is, "that an indefinite power of taxation in the latter (the government of the union) might, and probably would in time, deprive the former (the government of the states) of the means of providing for their own necessities; and would

subject them entirely to the mercy of the national legislature. As the laws of the union are to become the supreme law of the land; as it is to have power to pass all laws that may be necessary for carrying into execution the authorities with which it is proposed to vest it; the national government might at any time abolish the taxes imposed for state objects, upon the pretence of an interference with its own. It might allege a necessity for doing this, in order to give efficacy to the national revenues; and thus all the resources of taxation might, by degrees, become the subjects of federal monopoly, to the entire exclusion and destruction of the state governments."

The objections to the constitution which are noticed in these numbers were to the undefined power of the government to tax, not to the incidental privilege of exempting its own measures from state taxation. The consequences apprehended from this undefined power were that it would absorb all the objects of taxation, "to the exclusion and destruction of the state governments." The arguments of "The Federalist" are intended to prove the fallacy of these apprehensions; not to prove that the government was incapable of executing any of its powers, without exposing the means it employed to the embarrassments of state taxation. Arguments urged against these objections and these apprehensions are to be understood as relating to the points they mean to prove. Had the authors of those excellent essays been asked whether they contended for that construction of the constitution which would place within the reach of the states those measures which the government might adopt for the execution of its powers, no man who has read their instructive pages will hesitate to admit that their answer must have been in the negative.

It has also been insisted, that, as the power of taxation in the general and state governments is acknowledged to be concurrent, every argument, which would sustain the right of the general government to tax banks chartered by the states, will equally sustain the right of the states to tax banks chartered by the general government.

But the two cases are not on the same reason. The people of all the states have created the general government, and have conferred upon it the general power of taxation. The people of all the states, and the states themselves, are represented in congress, and by their representatives exercise this power. When they tax the chartered institutions of the states, they tax their constituents; and these taxes must be uniform. But when a state taxes the operations of the government

of the United States, it acts upon institutions created, not by their own constituents, but by people over whom they claim no control. It acts upon the measures of a government created by others, as well as themselves, for the benefit of others in common with themselves. The difference is that which always exists, and always must exist, between the action of the whole on a part, and the action of a part on the whole,—between the laws of a government declared to be supreme, and those of a government which, when in opposition to those laws, is not supreme.

But if the full application of this argument could be admitted, it might bring into question the right of congress to tax the state banks, and could not prove the right of the states to tax the Bank of the United States.

The court has bestowed on this subject its most deliberate consideration. The result is a conviction that the states have no power, by taxation or otherwise, to retard, impede, burden, or in any manner control, the operations of the constitutional laws enacted by congress to carry into execution the powers vested in the general government. This is, we think, the unavoidable consequence of that supremacy which the constitution has declared.

We are unanimously of opinion that the law passed by the legislature of Maryland, imposing a tax on the Bank of the United States, is unconstitutional and void.

This opinion does not deprive the states of any resources which they originally possessed. It does not extend to a tax paid by the real property of the bank, in common with the other real property within the state, nor to a tax imposed on the interest which the citizens of Maryland may hold in this institution, in common with other property of the same description throughout the state. But this is a tax on the operations of the bank, and is consequently a tax on the operation of an instrument employed by the government of the union to carry its powers into execution. Such a tax must be unconstitutional.

THE SUPREME COURT THE FINAL JUDGE OF THE CONSTRUCTION OF THE CONSTITUTION

Cohen vs. State of Virginia
February Term, 1821.

[6 Wheaton's Reports, 264-447.]

P. J. and M. J. Cohen were indicted, under an act of Virginia, for selling lottery tickets; and judgment was given against them. An appeal to the higher Virginia courts being refused, because no higher court had jurisdiction of the subject-matter, they sued out a writ of error to the supreme court of the United States. The attorney for Virginia moved to dismiss this writ, on the ground of want of jurisdiction in the supreme court, upon which motion Chief Justice Marshall delivered the opinion of the court as follows:—

This is a writ of error to a judgment rendered in the court of hustings for the borough of Norfolk, on an information for selling lottery tickets, contrary to an act of the legislature of Virginia. In the state court the defendant claimed the protection of an act of congress. A case was agreed between the parties, which states the act of assembly on which the prosecution was founded, and the act of congress on which the defendant relied, and concludes in these words: "If upon this case the court shall be of opinion that the acts of congress before mentioned were valid, and, on the true construction of those acts, the lottery tickets sold by the defendants as aforesaid might lawfully be sold within the state of Virginia, notwithstanding the act or statute of the general assembly of Virginia prohibiting such sale, then judgment to be entered for the defendants: And if the court should be of opinion that the statute or act of the general assembly of the state of Virginia, prohibiting such sale, is valid, notwithstanding the said acts of congress, then judgment to be entered that the defendants are guilty, and that the commonwealth recover against them one hundred dollars and costs."

Judgment was rendered against the defendants; and the court in which it was rendered being the highest court of the state, in which the cause was cognizable, the record has been brought into this court by writ of error.

The defendant in error moves to dismiss this writ for want of jurisdiction.

In support of this motion three points have been made, and argued with the ability which the importance of the question merits. These points are,—

1st. That a state is a defendant.

2d. That no writ of error lies from this court to a state court.

3d. The third point has been presented in different forms by the gentlemen who have argued it. The counsel who opened the cause said that the want of jurisdiction was shown by the subject-matter of the case. The counsel who followed him said that jurisdiction was not given by the judiciary act. The court has bestowed all its attention on the arguments of both gentlemen, and supposes that their tendency is to show that this court has no jurisdiction of the case, or, in other words, has no right to review the judgment of the state court, because neither the constitution nor any law of the United States has been violated by that judgment.

The questions presented to the court by the two first points made at the bar are of great magnitude, and may be truly said vitally to affect the union. They exclude the inquiry, whether the constitution and laws of the United States have been violated by the judgment which the plaintiffs in error seek to review; and maintain, that, admitting such violation, it is not in the power of the government to apply a corrective. They maintain that the nation does not possess a department capable of restraining peaceably, and by authority of law, any attempts which may be made by a part against the legitimate powers of the whole; and that the government is reduced to the alternative of submitting to such attempts, or of resisting them by force. They maintain that the constitution of the United States has provided no tribunal for the final construction of itself, or of the laws or treaties of the nation; but that this power may be exercised in the last resort by the courts of every state in the union. That the constitution, laws, and treaties may receive as many constructions as there are states; and that this is not a mischief, or, if a mischief, is irremediable. These abstract propositions are to be determined; for he, who demands decision without permitting inquiry, affirms that the decision he asks does not depend on inquiry.

If such be the constitution, it is the duty of the court to bow with respectful submission to its provisions. If such be not the constitution,

it is equally the duty of this court to say so; and to perform that task which the American people have assigned to the judicial department.

1st. The first question to be considered is, whether the jurisdiction of this court is excluded by the character of the parties, one of them being a state, and the other a citizen of that state?

The second section of the third article of the constitution defines the extent of the judicial power of the United States. Jurisdiction is given to the courts of the union in two classes of cases. In the first, their jurisdiction depends on the character of the cause, whoever may be the parties. This class comprehends "all cases in law and equity arising under this constitution, the laws of the United States, and treaties made, or which shall be made, under their authority." This clause extends the jurisdiction of the court to all the cases described, without making in its terms any exception whatever, and without any regard to the condition of the party. If there be any exception, it is to be implied against the express words of the article.

In the second class, the jurisdiction depends entirely on the character of the parties. In this are comprehended "controversies between two or more states, between a state and citizens of another state," "and between a state and foreign states, citizens, or subjects." If these be the parties, it is entirely unimportant what may be the subject of controversy. Be it what it may, these parties have a constitutional right to come into the courts of the union.

The counsel for the defendant in error have stated that the cases which arise under the constitution must grow out of those provisions which are capable of self-execution; examples of which are to be found in the second section of the fourth article, and in the tenth section of the first article.

A case which arises under a law of the United States must, we are likewise told, be a right given by some act which becomes necessary to execute the powers given in the constitution, of which the law of naturalization is mentioned as an example.

The use intended to be made of this exposition of the first part of the section, defining the extent of the judicial power, is not clearly understood. If the intention be merely to distinguish cases arising under the constitution from those arising under a law, for the sake of precision in the application of this argument, these propositions will not be controverted. If it be to maintain that a case, arising under the constitution or a law, must be one in which a party comes into court

to demand something conferred on him by the constitution or a law, we think the construction too narrow. A case in law or equity consists of the right of the one party, as well as of the other, and may truly be said to arise under the constitution or a law of the United States, whenever its correct decision depends on the construction of either. Congress seems to have intended to give its own construction of this part of the constitution in the twenty-fifth section of the judiciary act; and we perceive no reason to depart from that construction.

The jurisdiction of the court, then, being extended by the letter of the constitution to all cases arising under it, or under the laws of the United States, it follows that those who would withdraw any case of this description from that jurisdiction must sustain the exemption they claim on the spirit and true meaning of the constitution, which spirit and true meaning must be so apparent as to overrule the words which its framers have employed.

The counsel for the defendant in error have undertaken to do this; and have laid down the general proposition, that a sovereign, independent state is not suable, except by its own consent.

This general proposition will not be controverted. But its consent is not requisite in each particular case. It may be given in a general law. And if a state has surrendered any portion of its sovereignty, the question, whether a liability to suit be a part of this portion, depends on the instrument by which the surrender is made. If, upon a just construction of that instrument, it shall appear that the state has submitted to be sued, then it has parted with this sovereign right of judging in every case on the justice of its own pretensions, and has entrusted that power to a tribunal in whose impartiality it confides.

The American states, as well as the American people, have believed a close and firm union to be essential to their liberty and to their happiness. They have been taught by experience that this union cannot exist without a government for the whole; and they have been taught by the same experience that this government would be a mere shadow, that must disappoint all their hopes, unless invested with large portions of that sovereignty which belongs to independent states. Under the influence of this opinion, and thus instructed by experience, the American people, in the convention of their respective states, adopted the present constitution.

If it could be doubted whether from its nature it were not supreme in all cases where it is empowered to act, that doubt would be removed

by the declaration, that "this constitution, and the laws of the United States, which shall be made in pursuance thereof, and all treaties made or which shall be made under the authority of the United States, shall be the supreme law of the land; and the judges in every state shall be bound thereby; anything in the constitution or laws of any state to the contrary notwithstanding."

This is the authoritative language of the American people; and, if gentlemen please, of the American states. It marks, with lines too strong to be mistaken, the characteristic distinction between the government of the union and those of the states. The general government, though limited as to its objects, is supreme with respect to those objects. This principle is a part of the constitution; and if there be any who deny its necessity, none can deny its authority.

To this supreme government ample powers are confided; and if it were possible to doubt the great purposes for which they were so confided, the people of the United States have declared that they are given "in order to form a more perfect union, establish justice, ensure domestic tranquility, provide for the common defence, promote the general welfare, and secure the blessings of liberty to themselves and their posterity."

With the ample powers confided to this supreme government, for these interesting purposes, are connected many express and important limitations on the sovereignty of the states, which are made for the same purposes. The powers of the union, on the great subjects of war, peace, and commerce, and on many others, are in themselves limitations of the sovereignty of the states; but in addition to these, the sovereignty of the states is surrendered in many instances where the surrender can only operate to the benefit of the people, and where, perhaps, no other power is conferred on congress than a conservative power to maintain the principles established in the constitution. The maintenance of these principles in their purity is certainly among the great duties of the government. One of the instruments by which this duty may be peaceably performed is the judicial department. It is authorized to decide all cases of every description, arising under the constitution or laws of the United States. From this general grant of jurisdiction no exception is made of those cases in which a state may be a party. When we consider the situation of the government of the union and of a state in relation to each other, the nature of our constitution, the subordination of the state governments to that constitution, the great purpose for

which jurisdiction over all cases arising under the constitution and laws of the United States is confided to the judicial department, are we at liberty to insert in this general grant an exception of those cases in which a state may be a party? Will the spirit of the constitution justify this attempt to control its words? We think it will not. We think a case arising under the constitution or laws of the United States is cognizable in the courts of the union, whoever may be the parties to that case.

Had any doubt existed with respect to the just construction of this part of the section, that doubt would have been removed by the enumeration of those cases to which the jurisdiction of the federal courts is extended in consequence of the character of the parties. In that enumeration we find "controversies between two or more states, between a state and citizens of another state," "and between a state and foreign states, citizens, or subjects."

One of the express objects, then, for which the judicial department was established, is the decision of controversies between states, and between a state and individuals. The mere circumstance that a state is a party gives jurisdiction to the court. How, then, can it be contended that the very same instrument, in the very same section, should be so construed as that this same circumstance should withdraw a case from the jurisdiction of the court, where the constitution or laws of the United States are supposed to have been violated? The constitution gave to every person having a claim upon a state a right to submit his case to the court of the nation. However unimportant his claim might be, however little the community might be interested in its decision, the framers of our constitution thought it necessary, for the purposes of justice, to provide a tribunal as superior to influence as possible, in which that claim might be decided. Can it be imagined that the same persons considered a case involving the constitution of our country and the majesty of the laws, questions in which every American citizen must be deeply interested, as withdrawn from this tribunal because a state is a party?

While weighing arguments drawn from the nature of government, and from the general spirit of an instrument, and urged for the purpose of narrowing the construction which the words of that instrument seem to require, it is proper to place in the opposite scale those principles, drawn from the same sources, which go to sustain the words in their full operation and natural import. One of these, which has been pressed

with great force by the counsel for the plaintiffs in error, is that the judicial power of every well constituted government must be coextensive with the legislative, and must be capable of deciding every judicial question which grows out of the constitution and laws.

If any proposition may be considered as a political axiom, this, we think, may be so considered. In reasoning upon it as an abstract question, there would, probably, exist no contrariety of opinion respecting it. Every argument, proving the necessity of the department, proves also the propriety of giving this extent to it. We do not mean to say that the jurisdiction of the courts of the union should be construed to be coextensive with the legislative merely because it is fit that it should be so; but we mean to say that this fitness furnishes an argument in construing the constitution which ought never to be overlooked, and which is most especially entitled to consideration when we are inquiring whether the words of the instrument which purport to establish this principle shall be contracted for the purpose of destroying it.

The mischievous consequences of the construction contended for on the part of Virginia are also entitled to great consideration. It would prostrate, it has been said, the government and its laws at the feet of every state in the union. And would not this be its effect? What power of the government could be executed by its own means in any state disposed to resist its execution by a course of legislation? The laws must be executed by individuals acting within the several states. If these individuals may be exposed to penalties, and if the courts of the union cannot correct the judgments by which these penalties may be enforced, the course of the government may be, at any time, arrested by the will of one of its members. Each member will possess a veto on the will of the whole.

The answer which has been given to this argument does not deny its truth, but insists that confidence is reposed, and may be safely reposed, in the state institutions; and that, if they shall ever become so insane or so wicked as to seek the destruction of the government, they may accomplish their object by refusing to perform the functions assigned to them.

We readily concur with the counsel for the defendant in the declaration that the cases which have been put of direct legislative resistance for the purpose of opposing the acknowledged powers of the government are extreme cases, and in the hope that they will never occur; but we cannot help believing that a general conviction of the total incapacity

of the government to protect itself and its laws in such cases would contribute in no inconsiderable degree to their occurrence.

Let it be admitted that the cases which have been put are extreme and improbable, yet there are gradations of opposition to the laws, far short of those cases, which might have a baneful influence on the affairs of the nation. Different states may entertain different opinions on the true construction of the constitutional powers of congress. We know, that at one time the assumption of the debts contracted by the several states during the war of our revolution was deemed unconstitutional by some of them. We know, too, that at other times certain taxes imposed by congress have been pronounced unconstitutional. Other laws have been questioned partially, while they were supported by the great majority of the American people. We have no assurance that we shall be less divided than we have been. States may legislate in conformity to their opinions, and may enforce those opinions by penalties. It would be hazarding too much to assert that the judicatures of the states will be exempt from the prejudices by which the legislatures and people are influenced, and will constitute perfectly impartial tribunals. In many states the judges are dependent for office and for salary on the will of the legislature. The constitution of the United States furnishes no security against the universal adoption of this principle. When we observe the importance which that constitution attaches to the independence of judges, we are the less inclined to suppose that it can have intended to leave these constitutional questions to tribunals where this independence may not exist, in all cases where a state shall prosecute an individual who claims the protection of an act of congress. These prosecutions may take place even without a legislative act. A person making a seizure under an act of congress may be indicted as a trespasser, if force has been employed, and of this a jury may judge. How extensive may be the mischief, if the first decisions in such cases should be final!

These collisions may take place in times of no extraordinary commotion. But a constitution is framed for ages to come, and is designed to approach immortality as nearly as human institutions can approach it. Its course cannot always be tranquil. It is exposed to storms and tempests, and its framers must be unwise statesmen indeed, if they have not provided it, as far as its nature will permit, with the means of self-preservation from the perils it may be destined to encounter. No government ought to be so defective in its organization as not to contain

within itself the means of securing the execution of its own laws against other dangers than those which occur every day. Courts of justice are the means most usually employed; and it is reasonable to expect that a government should repose on its own courts, rather than on others. There is certainly nothing in the circumstances under which our constitution was formed, nothing in the history of the times, which would justify the opinion that the confidence reposed in the states was so implicit as to leave in them and their tribunals the power of resisting or defeating, in the form of law, the legitimate measures of the union. The requisitions of congress, under the confederation, were as constitutionally obligatory as the laws enacted by the present congress. That they were habitually disregarded is a fact of universal notoriety. With the knowledge of this fact, and under its full pressure, a convention was assembled to change the system. Is it so improbable that they should confer on the judicial department the power of construing the constitution and laws of the union in every case, in the last resort, and of preserving them from all violation from every quarter, so far as judicial decisions can preserve them, that this improbability should essentially affect the construction of the new system? We are told, and we are truly told, that the great change which is to give efficacy to the present system is its ability to act on individuals directly, instead of acting through the instrumentality of state governments. But ought not this ability, in reason and sound policy, to be applied directly to the protection of individuals employed in the execution of the laws, as well as to their coercion? Your laws reach the individual without the aid of any other power; why may they not protect him from punishment for performing its duty in executing them?

The counsel for Virginia endeavor to obviate the force of these arguments by saying that the dangers they suggest, if not imaginary, are inevitable; that the constitution can make no provision against them; and that, therefore, in construing that instrument they ought to be excluded from our consideration. This state of things, they say, cannot arise until there shall be a disposition so hostile to the present political system as to produce a determination to destroy it; and when that determination shall be produced, its effects will not be restrained by parchment stipulations. The fate of the constitution will not then depend on judicial decisions. But, should no appeal be made to force, the states can put an end to the government by refusing to act. They have only not to elect senators, and it expires without a struggle.

It is very true, that, whenever hostility to the existing system shall become universal, it will be also irresistible. The people made the constitution, and the people can unmake it. It is the creature of their will, and lives only by their will. But this supreme and irresistible power to make or to unmake resides only in the whole body of the people, not in any subdivision of them. The attempt of any of the parts to exercise it is usurpation, and ought to be repelled by those to whom the people have delegated their power of repelling it.

The acknowledged inability of the government, then, to sustain itself against the public will, and by force, or otherwise, to control the whole nation, is no sound argument in support of its constitutional inability to preserve itself against a section of the nation acting in opposition to the general will.

It is true, that, if all the states, or a majority of them, refuse to elect senators, the legislative powers of the union will be suspended. But if any one state shall refuse to elect them, the senate will not on that account be the less capable of performing all its functions. The argument founded on this fact would seem rather to prove the subordination of the parts to the whole than the complete independence of any one of them. The framers of the constitution were indeed unable to make any provisions which should protect that instrument against a general combination of the states, or of the people, for its destruction; and, conscious of this inability, they have not made the attempt. But they were able to provide against the operation of measures adopted in any one state, whose tendency might be to arrest the execution of the laws; and this it was the part of true wisdom to attempt. We think they have attempted it.

It has been also urged, as an additional objection to the jurisdiction of the court, that cases between a state and one of its own citizens do not come within the general scope of the Constitution; and were obviously never intended to be made cognizable in the federal courts. The state tribunals might be suspected of partiality in cases between itself, or its citizens, and aliens, or the citizens of another state, but not in proceedings by a state against its own citizens. That jealousy which might exist in the first case could not exist in the last, and therefore the judicial power is not extended to the last.

This is very true, so far as jurisdiction depends on the character of the parties; and the argument would have great force if urged to prove that this court could not establish the demand of a citizen upon his state,

but is not entitled to the same force when urged to prove that this court cannot inquire whether the Constitution or laws of the United States protect a citizen from prosecution instituted against him by a state. If jurisdiction depended entirely on the character of the parties, and was not given where the parties have not an original right to come into court, that part of the second section of the third article, which extends the judicial power to all cases arising under the Constitution and laws of the United States, would be mere surplusage. It is to give jurisdiction where the character of the parties would not give it that this very important part of the clause was inserted. It may be true that the partiality of the state tribunals, in ordinary controversies between a state and its citizens, was not apprehended, and therefore the judicial power of the Union was not extended to such cases; but this was not the sole nor the greatest object for which this department was created. A more important, a much more interesting object, was the preservation of the Constitution and laws of the United States, so far as they can be preserved by judicial authority; and therefore the jurisdiction of the courts of the Union was expressly extended to all cases arising under that Constitution and those laws. If the Constitution or laws may be violated by proceedings instituted by a state against its own citizens, and if that violation may be such as essentially to affect the Constitution and the laws, such as to arrest the progress of government in its constitutional course, why should these cases be excepted from that provision which extends the judicial power of the Union to all cases arising under the Constitution and laws?

After bestowing on this subject the most attentive consideration, the court can perceive no reason founded on the character of the parties for introducing an exception which the Constitution has not made; and we think that the judicial power, as originally given, extends to all cases arising under the Constitution or a law of the United States, whoever may be the parties.

THOMAS BENTON

Thomas Hart Benton was born near Hillsborough, N. C., March 14, 1782, but early removed to Tennessee.

He began to practice law at Nashville in 1810. In the War of 1812 he was a Colonel under Jackson. In 1815 he removed to St. Louis, and in 1820 was elected Senator for Missouri.

In 1826, although he had had a violent quarrel with Jackson in Tennessee, he now warmly supported him, and became his chief lieutenant. Benton was one of the chief opponents of the United States Bank and favored a gold and silver currency, though his views were not adopted. It was through his persistent efforts that the resolutions against Jackson were expunged from the Senate record.

For thirty years he was one of the prominent figures in the Senate. During all this time he lent his aid to the growth of the new West and favored throwing open the public lands to actual settlers. He was a constant opponent of Calhoun, both because of the enmity between Calhoun and Jackson and because he considered Calhoun's ideas to be sectional. For this latter reason, though he had opposed the repeal of the Missouri Compromise, yet he refused to support Fremont in 1856, notwithstanding that Fremont was his son-in-law.

His "Thirty Years' View" gives a good idea of the feeling of the periods it covers. He died April 10, 1858.

THE REVISION OF THE TARIFF IN 1828 AND THE RISE OF THE DOCTRINE OF NULLIFICATION

The tariff of 1828 is an era in our legislation, being the event from which the doctrine of "nullification" takes its origin, and from which a serious division dates between the North and South. It was the work of politicians and manufacturers; and was commenced for the benefit of the woolen interest, and upon a bill chiefly designed to favor that branch of manufacturing industry. But, like all other bills of the kind, it required help from other interests to get itself along; and that help was only to be obtained by admitting other interests into the benefits of the bill. And so, what began as a special benefit, intended for the advantage of a particular interest, became general, and ended with including all manufacturing interests—or at least as many as were necessary to make up the strength necessary to carry it. The productions of different States, chiefly in the West, were favored by additional duties on their rival imports; as lead in Missouri and Illinois, and hemp of

Kentucky; and thus, though opposed to the object of the bill, many members were necessitated to vote for it. Mr. Rowan, of Kentucky, well exposed the condition of others in this respect, in showing his own in some remarks which he made, and in which he said:

"He was not opposed to the tariff as a system of revenue, honestly devoted to the objects and purposes of revenue—on the contrary, he was friendly to a tariff of that character; but when perverted by the ambition of political aspirants, and the secret influence of inordinate cupidity, to purposes of individual, and sectional ascendency, he could not be seduced by the captivation of names, or terms, however attractive, to lend it his individual support.

"It is in vain, Mr. President, said he, that it is called the American System—names do not alter things. There is but one American System, and that is delineated in the State and Federal constitutions. It is the system of equal rights and privileges secured by the representative principle—a system, which, instead of subjecting the proceeds of the labor of some to taxation, in the view to enrich others, secures to all the proceeds of their labor—exempts all from taxation, except for the support of the protecting power of the government. As a tax necessary to the support of the government, he would support it—call it by what name you please;—as a tax for any other purpose, and especially for the purposes to which he had alluded—it had his individual reprobation, under whatever name it might assume.

"It might, he observed, be inferred from what he had said, that he would vote against the bill. He did not wish any doubts to be entertained as to the vote he should give upon this measure, or the reasons which would influence him to give it. He was not at liberty to substitute his individual opinion for that of his State. He was one of the organs here, of a State, that had, by the tariff of 1824, been chained to the car of the Eastern manufacturers—a State that had been from that time, and was now groaning under the pressure of that unequal and unjust measure—a measure from the pressure of which, owing to the prevailing illusion throughout the United States, she saw no hope of escape, by a speedy return to correct principles;—and seeing no hope of escaping from the ills of the system, she is constrained, on principles of self-defence, to avail herself of the mitigation which this bill presents, in the duties which it imposes upon foreign hemp, spirits, iron, and molasses. The hemp, iron, and distilled spirits of the West, will, like the woolens of the Eastern States. be encouraged to the extent of the tax indirectly imposed by this bill, upon those who shall buy and consume them. Those who may need, and buy those articles, must pay to the grower, or manufacturer of them, an increased price to the amount of the duties imposed upon the like articles of foreign growth or fabric. To this tax upon the labor of the consumer, his individual opinion was opposed. But, as the organ of the State of Kentucky, he felt himself bound to surrender his individual opinion, and express the opinion of his State."

Thus, this tariff bill, like every one admitting a variety of items, contains a vicious principle, by which a majority may be made up to

pass a measure which they do not approve. But besides variety of agricultural and manufacturing items collected into this bill, there was another of very different import admitted into it, namely, that of party politics. A presidential election was approaching: General Jackson and Mr. Adams were the candidates—the latter in favor of the "American System"—of which Mr. Clay (his Secretary of State) was the champion, and indissolubly connected with him in the public mind in the issue of the election. This tariff was made an administration measure, and became an issue in the canvass; and to this Mr. Rowan significantly alluded when he spoke of a tariff as being "perverted by the ambition of political aspirants." It was in vain that the manufacturers were warned not to mix their interests with the doubtful game of politics. They yielded to the temptation—yielded as a class, though with individual exceptions—for the sake of the temporary benefit, without seeming to realize the danger of connecting their interests with the fortunes of a political party. This tariff of '28, besides being remarkable for giving birth to "nullification," and heart-burning between the North and the South, was also remarkable for a change of policy in the New England States, in relation to the protective system. Being strongly commercial, these States had hitherto favored free trade; and Mr. Webster was the champion of that trade up to 1824. At this session a majority of those States, and especially those which classed politically with Mr. Adams and Mr. Clay, changed their policy: and Webster became a champion of the protective system. The cause of this change, as then alleged, was the fact that the protective system had become the established policy of the government, and that these States had adapted their industry to it; though it was insisted, on the other hand, that political calculation had more to do with the change than federal legislation: and, in fact, the question of this protection was one of those which lay at the foundation of parties, and was advocated by General Hamilton in one of his celebrated reports of fifty years ago. But on this point it is right that New England should speak for herself, which she did at the time of the discussion of the tariff in '28; and through the member, now a senator (Mr. Webster), who typified in his own person the change which his section of the Union had undergone. He said:

"New England, sir, has not been a leader in this policy. On the contrary, she held back, herself, and tried to hold others back from it, from the adoption of the constitution to 1824. Up to 1824, she was accused of sinister and selfish designs, because she discountenanced the progress of this policy. It was laid to her charge, then, that having

established her manufactures herself, she wished that others should not have the power of rivalling her; and, for that reason, opposed all legislative encouragement. Under this angry denunciation against her, the act of 1824 passed. Now the imputation is precisely of an opposite character. The present measure is pronounced to be exclusively for the benefit of New England: to be brought forward by her agency, and designed to gratify the cupidity of her wealthy establishments.

"Both charges, sir, are equally without the slightest foundation. The opinion of New England, up to 1824, was founded in the conviction, that, on the whole, it was wisest and best, both for herself and others, that manufacturers should make haste slowly. She felt a reluctance to trust great interests on the foundation of government patronage; for who could tell how long such patronage would last, or with what steadiness, skill, or perseverance, it would continue to be granted? It is now nearly fifteen years, since, among the first things which I ever ventured to say here, was the expression of a serious doubt, whether this government was fitted by its construction, to administer aid and protection to particular pursuits; whether, having called such pursuits into being by indications of its favor, it would not, afterwards, desert them, when troubles come upon them; and leave them to their fate. Whether this prediction, the result, certainly, of chance, and not of sagacity, will so soon be fulfilled, remains to be seen.

"At the same time it is true, that from the very first commencement of the government, those who have administered its concerns have held a tone of encouragement and invitation towards those who should embark in manufactures. All the Presidents, I believe, without exception, have concurred in this general sentiment; and the very first act of Congress, laying duties of impost, adopted the then unusual expedient of a preamble, apparently for little other purpose than that of declaring, that the duties, which it imposed, were imposed for the encouragement and protection of manufactures. When, at the commencement of the late war, duties were doubled, we were told that we should find a mitigation of the weight of taxation in the new aid and succor which would be thus afforded to our own manufacturing labor. Like arguments were urged, and prevailed, but not by the aid of New England votes, when the tariff was afterwards arranged at the close of the war, in 1816. Finally, after a whole winter's deliberation, the act of 1824 received the sanction of both Houses of Congress, and settled the policy of the country. What, then, was New England to do? She was fitted for manufacturing operations, by the amount and character of her population, by her capital, by the vigor and energy of her free labor, by the skill, economy, enterprise, and perseverance of her people. I repeat, what was she, under these circumstances, to do? A great and prosperous rival in her near neighborhood, threatening to draw from her a part, perhaps a great part, of her foreign commerce; was she to use, or to neglect, those other means of seeking her own prosperity which belonged to her character and her condition? Was she to hold out forever against the course of the government, and see herself losing, on one side, and yet making no efforts to sustain herself on the other? No, sir. Nothing was left to New England, after the act of 1824, but to conform herself to the will

of others. Nothing was left to her, but to consider that the government had fixed and determined its own policy; and that policy was protection."

The question of a protective tariff had now not only become political, but sectional. In the early years of the federal government it was not so. The tariff bills, as the first and the second that were passed, declared in their preambles that they were for the encouragement of manufactures, as well as for raising revenue; but then the duties imposed were all moderate—such as a revenue system really required; and there were no "minimums," to make a false basis for the calculation of duties, by enacting that all which cost less than a certain amount should be counted to have cost that amount; and be rated at the custom-house accordingly. In this early period the Southern States were as ready as any part of the Union in extending the protection to home industry which resulted from the imposition of revenue duties on rival imported articles, and on articles necessary to ourselves in time of war; and some of her statesmen were amongst the foremost members of Congress in promoting that policy. As late as 1816, some of her statesmen were still in favor of protection, not merely as an incident to revenue, but as a substantive object: and among these was Mr. Calhoun of South Carolina —who even advocated the minimum provision—then for the first time introduced into a tariff bill, and upon his motion—and applied to the cotton goods imported. After that year (1816) the tariff bills took a sectional aspect—the Southern States, with the exception of Louisiana (led by her sugar-planting interest), against them: the New England States also against them: the Middle and Western States for them. After 1824 the New England States (always meaning the greatest portion when a section is spoken of) classed with the protective States—leaving the South alone, as a section, against that policy. My personal position was that of a great many others in the three protective sections—opposed to the policy, but going with it, on account of the interest of the State in the protection of some of its productions. I moved an additional duty upon lead, equal to one hundred per centum; and it was carried. I moved a duty upon indigo, a former staple of the South, but now declined to a slight production; and I proposed a rate of duty in harmony with the protective features of the bill. No southern member would move that duty, because he opposed the principle: I moved it, that the "American System," as it was called, should work alike in all parts of our America. I supported the motion with some reasons, and some

views of the former cultivation of that plant in the Southern States, and its present decline, thus:

"Mr. Benton then proposed an amendment, to impose a duty of 25 cents per pound on imported indigo, with a progressive increase at the rate of 25 cents per pound per annum, until the whole duty amounted to $1 per pound. He stated his object to be two-fold in proposing this duty, first, to place the American System beyond the reach of its enemies, by procuring a home supply of an article indispensable to its existence; and next, to benefit the South by reviving the cultivation of one of its ancient and valuable staples.

"Indigo was first planted in the Carolinas and Georgia about the year 1740, and succeeded so well as to command the attention of the British manufacturers and the British parliament. An act was passed for the encouragement of its production in these colonies, in the reign of George the Second; the preamble to which Mr. B. read, and recommended to the consideration of the Senate. It recited that a regular, ample, and certain supply of indigo was indispensable to the success of British manufacturers; that these manufacturers were then dependent upon foreigners for a supply of this article; and that it was the dictate of a wise policy to encourage the production of it at home. The act then went on to direct that a premium of sixpence sterling should be paid out of the British treasury for every pound of indigo imported into Great Britain, from the Carolinas and Georgia. Under the fostering influence of this bounty, said Mr. B., the cultivation of indigo became great and extensive. In six years after the passage of the act, the export was 217,000 lbs. and at the breaking out of the Revolution it amounted to 1,100,000 lbs. The Southern colonies became rich upon it; for the cultivation of cotton was then unknown; rice and indigo were the staples of the South. After the Revolution, and especially after the great territorial acquisitions which the British made in India, the cultivation of American indigo declined. The premium was no longer paid; and the British government, actuated by the same wise policy which made them look for a home supply of this article from the Carolinas, when they were a part of the British possessions, now looked to India for the same reason. The export of American indigo rapidly declined. In 1800 it had fallen to 400,000 lbs.; in 1814 to 40,000 lbs.; and in the last year to 6 or 8,000 lbs. In the meantime our manufacturies were growing up; and having no supply of indigo at home, they had to import from abroad. In 1826 this importation amounted to 1,150,000 lbs., costing a fraction less than two millions of dollars, and had to be paid for almost entirely in ready money, as it was chiefly obtained from places where American produce was in no demand. Upon this state of facts, Mr. B. conceived it to be the part of a wise and prudent policy to follow the example of the British parliament in the reign of George II. and provide a home supply of this indispensable article. Our manufacturers now paid a high price for fine indigo, no less than $2.50 per pound, as testified by one of themselves before the Committee on Manufactures raised in the House of Representatives. The duty which he proposed was only 40 per cent. upon that value, and would not even reach that rate for four years. It was less than one-half the duty which the same bill proposed to lay

instanter upon the very cloth which this indigo was intended to dye. In the end it would make all indigo come cheaper to the manufacturer, as the home supply would soon be equal, if not superior to the demand; and in the mean time, it could not be considered a tax on the manufacturer, as he would levy the advance which he had to pay, with a good interest, upon the wearer of the cloth.

"Mr. B. said he expected a unanimous vote in favor of his amendment. The North should vote for it to secure the life of the American System; to give a proof of their regard for the South; to show that the country south of the Potomac is included in the bill for some other purpose besides that of oppression. The South itself, although opposed to the further increase of duties, should vote for this duty; that the bill, if it passes, may contain one provision favorable to its interests. The West should vote for it through gratitude for fifty years of guardian protection, generous defence, and kind assistance, which the South had given it under all its trials; and for the purpose of enlarging the market, increasing the demand in the South and its ability to purchase the horses, mules, and provisions which the West can sell nowhere else. For himself he had personal reasons for wishing to do this little justice to the South. He was a native of one of these States (N. Carolina)—the bones of his father and his grandfather rested there. Her Senators and Representatives were his early and his hereditary friends. The venerable Senator before him (Mr. Macon) had been the friend of him and his, through four generations in a straight line; the other Senator (Mr. Branch) was his schoolfellow: the other branch of the legislature, the House of Representatives, also showed him in the North Carolina delegation, the friends of him and his through successive generations. Nor was this all. He felt for the sad changes which had taken place in the South in the last fifty years. Before the Revolution it was the seat of wealth as well as of hospitality. Money, and all that it commanded, abounded there. But how now? All this is reversed.

"Wealth has fled from the South, and settled in the regions north of the Potomac, and this in the midst of the fact that the South, in four staples alone, in cotton, tobacco, rice and indigo (while indigo was one of its staples), had exported produce since the Revolution, to the value of eight hundred millions of dollars, and the North had exported comparatively nothing. This sum was prodigious; it was nearly equal to half the coinage of the mint of Mexico since the conquest by Cortez. It was twice or thrice the amount of the product of the three thousand gold and silver mines of Mexico, for the same period of fifty years. Such an export would indicate unparalleled wealth; but what was the fact? In place of wealth, a universal pressure for money was felt; not enough for current expenses; the price of all property down; the country drooping and languishing; towns and cities decaying; and the frugal habits of the people pushed to the verge of universal self-denial, for the preservation of their family estates. Such a result is a strange and wonderful phenomenon. It calls upon statesmen to inquire into the cause; and if they inquire upon the theatre of this strange metamorphosis, they will receive one universal answer from all ranks and all

ages, that it is federal legislation which has worked this ruin. Under this legislation the exports of the South have been made the basis of the federal revenue. The twenty odd millions annually levied upon imported goods, are deducted out of the price of their cotton, rice and tobacco, either in the diminished price which they receive for these staples in foreign ports, or in the increased price which they pay for the articles they have to consume at home. Virginia, the two Carolinas, and Georgia, may be said to defray three-fourths of the annual expense of supporting the federal government; and of this great sum annually furnished by them, nothing, or next to nothing, is returned to them in the shape of government expenditure. That expenditure flows in an opposite direction; it flows northwardly, in one uniform, uninterrupted and perennial stream; it takes the course of trade and of exchange; and this is the reason why wealth disappears from the South and rises up in the North. Federal legislation does all this; it does it by the simple process of eternally taking away from the South, and returning nothing to it. If it returned to the South the whole, or even a good part of what it exacted, the four States south of the Potomac might stand the action of this system, as the earth is enabled to stand the exhausting influence of the sun's daily heat by the refreshing dews which are returned to it at night; but as the earth is dried up, and all vegetation destroyed in regions where the heat is great, and no dews returned, so must the South be exhausted of its money and its property by a course of legislation which is for ever taking from it, and never returning any thing to it.

"Every new tariff increases the force of this action. No tariff has ever yet included Virginia, the two Carolinas, and Georgia, within its provisions, except to increase the burdens imposed upon them. This one alone presents the opportunity to form an exception, by reviving and restoring the cultivation of one of its ancient staples,—one of the sources of its wealth before the Revolution. The tariff of 1828 owes this reparation to the South, because the tariff of 1816 contributed to destroy the cultivation of indigo; sunk the duty on the foreign article, from twenty-five to fifteen cents per pound. These are the reasons for imposing the duty on indigo, now proposed. What objections can possibly be raised to it? Not to the quality; for it is the same which laid the foundation of the British manufactures, and sustained their reputation for more than half a century; not to the quantity; for the two Carolinas and Georgia alone raised as much fifty years ago as we now import, and we have now the States of Louisiana, Alabama, and Mississippi, and the Territories of Florida and Arkansas, to add to the countries which produce it; not to the amount of the duty; for its maximum will be but forty per cent., only one-half of the duty laid by this bill on the cloth it is to dye; and that maximum, not immediate, but attained by slow degrees at the end of four years, in order to give time for the domestic article to supply the place of the imported. And after all, it is not a duty on the manufacturer, but on the wearer of the goods; from whom he levies, with a good interest on the price of the cloths, all that he expends in the purchase of materials. For once, said Mr. B., I expect a unanimous vote on a clause in the tariff. This indigo clause must have the singular and unprecedented honor of an unanimous voice

in its favor. The South must vote for it, to revive the cultivation of one of its most ancient and valuable staples; the West must vote for it through gratitude for past favors—through gratitude for the vote on hemp this night—and to save, enlarge, and increase the market for its own productions; the North must vote for it to show their disinterestedness; to give one proof of just feeling towards the South; and, above all, to save their favorite American System from the deadly blow which Great Britain can at any moment give it by stopping or interrupting the supplies of foreign indigo; and the whole Union, the entire legislative body, must vote for it, and vote for it with joy and enthusiasm, because it is impossible that Americans can deny to sister States of the Confederacy what a British King and a British Parliament granted to these same States when they were colonies and dependents of the British crown."

Mr. Hayne, of South Carolina, seconded my motion in a speech of which this is an extract:

"Mr. Hayne said he was opposed to this bill in its principles as well as in its details. It could assume no shape which would make it acceptable to him, or which could prevent it from operating most oppressively and unjustly on his constituents. With these views, he had determined to make no motion to amend the bill in any respect whatever; but when such motions were made by others, and he was compelled to vote on them, he knew no better rule than to endeavor to make the bill consistent with itself. On this principle he had acted in all the votes he had given on this bill. He had endeavored to carry out to its legitimate consequences what gentlemen are pleased to call the 'American System.' With a fixed resolution to vote against the bill, he still considered himself at liberty to assist in so arranging the details as to extend to every great interest, and to all portions of the country, as far as may be practicable, equal protection, and to distribute the burdens of the system equally, in order that its benefits as well as its evils may be fully tested. On this principle, he should vote for the amendment of the gentleman from Missouri, because it was in strict conformity with all the principles of the bill. As a southern man, he would ask no boon for the South—he should propose nothing; but he must say that the protection of indigo rested on the same principles as every other article proposed to be protected by this bill, and he did not see how gentlemen could, consistently with their maxims, vote against it. What was the principle on which this bill was professedly founded? If there was any principle at all in the bill, it was that, whenever the country had the capacity to produce an article with which any imported article could enter into competition, the domestic product was to be protected by a duty. Now, had the Southern States the capacity to produce indigo? The soil and climate of those States were well suited to the culture of the article. At the commencement of the Revolution our exports of the article amounted to no less than 1,100,000 lbs. The whole quantity now imported into the United States is only 1,150,000 lbs.; so that the capacity of the country to produce a sufficient quantity of indigo to supply the wants of the manufacturers is

unquestionable. It is true that the quantity now produced in the country is not great.

"In 1818 only 700 lbs. of domestic indigo were exported.
"In 1825 9,955 do.
"In 1826 5,289 do.

"This proves that the attention of the country is now directed to the subject. The senator from Indiana, in some remarks which he made on this subject yesterday, stated that, according to the principles of the American System (so called), protection was not extended to any article which the country was not in the habit of exporting. This is entirely a mistake. Of the articles protected by the tariff of 1824, as well as those included in this bill, very few are exported at all. Among these are iron, woolens, hemp, flax, and several others. If indigo is to be protected at all, the duties proposed must surely be considered extremely reasonable, the maximum proposed being much below that imposed by this bill on wool, woolens, and other articles. The duty on indigo till 1816, was 25 cents per pound. It was then (in favor of the manufacturers) reduced to 15 cents. The first increase of duty proposed here, is only to put back the old duty of 25 cents per pound, equal to an ad valorem duty of from 10 to 15 per cent.—and the maximum is only from 40 to 58 per cent. ad valorem, and that will not accrue for several years to come. With this statement of facts, Mr. H. said he would leave the question in the hands of those gentlemen who were engaged in giving this bill the form in which it is to be submitted to the final decision of the Senate."

The proposition for this duty on imported indigo did not prevail. In lieu of the amount proposed, and which was less than any protective duty in the bill, the friends of the "American System" (constituting a majority of the Senate) substituted a nominal duty of five cents on the pound—to be increased five cents annually for ten years—and to remain at fifty. This was only about twenty per centum on the cost of the article, and that only to be attained after a progression of ten years; while all other duties in the bill were from four to ten times that amount —and to take effect immediately. A duty so contemptible, so out of proportion to the other provisions of the bill, and doled out in such miserable drops, was a mockery and insult; and so viewed by the southern members. It increased the odiousness of the bill, by showing that the southern section of the Union was only included in the "American System" for its burdens, and not for its benefits. Mr. McDuffie, in the House of Representatives, inveighed bitterly against it, and spoke the general feeling of the Southern States when he said:

"Sir, if the union of these States shall ever be severed, and their liberties subverted, the historian who records these disasters will have to ascribe them to measures of this description. I do sincerely believe that neither this government nor any free government, can exist for a

quarter of a century, under such a system of legislation. Its inevitable tendency is to corrupt, not only the public functionaries, but all those portions of the Union and classes of society who have an interest, real or imaginary, in the bounties it provides, by taxing other sections and other classes? What, sir, is the essential characteristic of a freeman? It is that independence which results from an habitual reliance upon his own resources and his own labor for his support. He is not in fact a freeman, who habitually looks to the government for pecuniary bounties. And I confess that nothing in the conduct of those who are the prominent advocates of this system, has excited more apprehension and alarm in my mind, than the constant efforts made by all of them, from the Secretary of the Treasury down to the humblest coadjutor, to impress on the public mind the idea that national prosperity and individual wealth are to be derived, not from individual industry and economy, but from government bounties. An idea more fatal to liberty could not be inculcated. I said, on another occasion, that the days of Roman liberty were numbered when the people consented to receive bread from the public granaries. From that moment it was not the patriot who had shown the greatest capacity and made the greatest sacrifices to serve the republic, but the demagogue who would promise to distribute most profusely the spoils of the plundered provinces, that was elevated to office by a degenerate and mercenary populace. Every thing became venal, even in the country of Fabricius, until finally the empire itself was sold at public auction! And what, sir, is the nature and tendency of the system we are dicussing? It bears an analogy, but too lamentably striking, to that which corrupted the republican purity of the Roman people. God forbid that it should consummate its triumph over the public liberty, by a similar catastrophe, though even that is an event by no means improbable, if we continue to legislate periodically in this way, and to connect the election of our Chief Magistrate with the question of dividing out the spoils of certain States—degraded into Roman provinces—among the influential capitalists of the other States of this Union! Sir, when I consider that, by a single act like the present, from five to ten millions of dollars may be transferred annually from one part of the community to another; when I consider the disguise of disinterested patriotism under which the basest and most profligate ambition may perpetuate such an act of injustice and political prostitution, I cannot hesitate, for a moment, to pronounce this very system of indirect bounties, the most stupendous instrument of corruption ever placed in the hands of public functionaries. It brings ambition and avarice and wealth into a combination, which it is fearful to contemplate, because it is almost impossible to resist. Do we not perceive, at this very moment, the extraordinary and melancholy spectacle of less than one hundred thousand capitalists, by means of this unhallowed combination, exercising an absolute and despotic control over the opinions of eight millions of free citizens, and the fortunes and destinies of ten millions? Sir, I will not anticipate or forebode evil. I will not permit myself to believe that the Presidency of the United States will ever be bought and sold, by this system of bounties and prohibitions. But I must say that there are certain quarters of this Union in which, if a

candidate for the Presidency were to come forward with the Harrisburg tariff in his hand, nothing could resist his pretensions, if his adversary were opposed to this unjust system of oppression. Yes, sir, that bill would be a talisman which would give a charmed existence to the candidate who would pledge himself to support it. And although he were covered with all the "multiplying villainies of nature," the most immaculate patriot and profound statesman in the nation could hold no competition with him, if he should refuse to grant this new species of imperial donative."

Allusions were constantly made to the combination of manufacturing capitalists and politicians in pressing this bill. There was evidently foundation for the imputation. The scheme of it had been conceived in a convention of manufacturers in the State of Pennsylvania, and had been taken up by politicians, and was pushed as a party measure, and with the visible purpose of influencing the presidential election. In fact these tariff bills, each exceeding the other in its degree of protection, had become a regular appendage of our presidential elections—coming round in every cycle of four years, with that returning event. The year 1816 was the starting point: 1820, and 1824, and now 1828, having successively renewed the measure, with successive augmentations of duties. The South believed itself impoverished to enrich the North by this system; and certainly a singular and unexpected result had been seen in these two sections. In the colonial state, the Southern were the rich part of the colonies, and expected to do well in a state of independence. They had the exports, and felt secure of their prosperity: not so of the North, whose agricultural resources were few, and who expected privations from the loss of British favor. But in the first half century after Independence this expectation was reversed. The wealth of the North was enormously aggrandized: that of the South had declined. Northern towns had become great cities: Southern cities had decayed, or become stationary; and Charleston, the principal port of the South, was less considerable than before the Revolution. The North became a money-lender to the South, and southern citizens made pilgrimages to northern cities, to raise money upon the hypothecation of their patrimonial estates. And this in the face of a southern export since the Revolution to the value of eight hundred millions of dollars!—a sum equal to the product of the Mexican mines since the days of Cortez! and twice or thrice the amount of their product in the same fifty years. The Southern States attributed this result to the action of the federal government—its double action of levying revenue upon the industry of one section of the Union and expending it in another—

and especially to its protective tariffs. To some degree this attribution was just, but not to the degree assumed; which is evident from the fact that the protective system had then only been in force for a short time—since the year 1816; and the reversed condition of the two sections of the Union had commenced before that time. Other causes must have had some effect: but for the present we look to the protective system; and, without admitting it to have done all the mischief of which the South complained, it had yet done enough to cause it to be condemned by every friend to equal justice among the States—by every friend to the harmony and stability of the Union—by all who detested sectional legislation—by every enemy to the mischievous combination of partisan politics with national legislation. And this was the feeling with the mass of the democratic voters who voted for the tariff of 1828, and who were determined to act upon that feeling upon the overthrow of the political party which advocated the protective system; and which overthrow they believed to be certain at the ensuing presidential election.

JOHN CALHOUN

John Caldwell Calhoun was born in the district of Abbeville, March 18, 1782. His father, Patrick Calhoun, was an Irishman. In 1804 he graduated from Yale College. After being admitted to the bar he became interested in politics and was elected a Representative from South Carolina in 1811.

He was a strong Democrat, or Republican, as the party was then called. He supported the War of 1812, the United States Bank, and the Moderate Tariff of 1816. In 1817 he was appointed Secretary of War by Monroe. The compromise of 1820 received his support. In 1824 he was elected Vice-President under Adams almost unanimously, the adherents of both Adams and Jackson supporting him. He was re-elected Vice-President, this time under Jackson, in 1828. Jackson and Calhoun quarrelled because of the growing influence of Van Buren with the Administration, and Calhoun resigned from the Vice-Presidency. Before this the hard feeling in the South over questions of the tariff passed in accordance with Clay's "American Policy," led Calhoun

to seek a way by which the State could make void the law. The outcome was his doctrine of Nullification first developed in 1828. The best exposition of this doctrine is to be found in some of his general addresses and in his letter to General Hamilton, Aug. 28, 1832, rather than in his celebrated speech on the Force Bill. Calhoun would not support Jackson in 1832 and South Carolina threw away her electoral vote. In November the South Carolina Convention passed the famous Nullification Ordinance declaring void the tariff of 1828 and 1832.

Calhoun took Hayne's seat in the Senate, as it was thought he would be a stronger opponent of Webster, and Hayne became Governor of the State. Jackson was a Democratic Republican and did not believe in high tariffs, but he immediately flew in the face of all party precedent by making vigorous preparations to enforce the laws by National troops if necessary, and was said to have an ardent longing to hang Calhoun as a traitor.

The Nullification Ordinance was not carried out, and Jackson's vigorous policy made any nullification or secession by any one state thereafter impossible.

About this time the Whig party was formed, led by Clay and Webster. The Republicans that followed Jackson were called first Democratic Republicans and then simply Democrats. Calhoun at first acted with the Whigs on account of his opposition to Jackson, but soon became the leader of the Democrats.

In 1844 he was appointed Secretary of State by Tyler, who had been elected Vice-President by the Whigs, but really belonged to the Southern branch of the party sometimes called the "State Right Whigs." At this time he pushed forward the annexation of Texas, but later as a Senator, opposed the war with Mexico as unnecessary.

In 1847 Calhoun brought forward resolutions to the effect that Congress did not have the right to discriminate by keeping slavery out of the Territories. This was the principle of the "Dred Scott Decision" ten years later and the opposing views of the North and South upon it were irreconcilable.

Calhoun died March 31, 1850. He left a work suggesting the election of two Presidents, one from the North and one from the South, and defending slavery as a positive good. He probably did more than any one man to force the issues that eventually brought on the Civil War. He was a logical thinker from given premises, but his love for his State rather than the Nation threw his influence in direct opposition to the onward sweep of history.

ADDRESS

On the Relation which the States and General Government Bear to Each Other

The question of the relation which the States and General Government bear to each other is not one of recent origin. From the commencement of our system, it has divided public sentiment. Even in the Convention, while the Constitution was struggling into existence, there were two parties as to what this relation should be, whose different sentiments constituted no small impediment in forming that instrument. After the General Government went into operation, experience soon proved that the question had not terminated with the labors of the Convention. The great struggle that preceded the political revolution of 1801, which brought Mr. Jefferson into power, turned essentially on it, and the doctrines and arguments on both sides were embodied and ably sustained—on the one, in the Virginia and Kentucky Resolutions, and the Report to the Virginia Legislature; and on the other, in the replies of the legislature of Massachusetts and some of the other States. These resolutions and this report, with the decision of the Supreme Court of Pennsylvania about the same time (particularly in the case of Cobbett, delivered by Chief Justice McKean, and concurred in by the whole bench), contain what I believe to be the true doctrine on this important subject. I refer to them in order to avoid the necessity of presenting my views, with the reasons in support of them, in detail.

As my object is simply to state my opinions, I might pause with this reference to documents that so fully and ably state all the points immediately connected with this deeply important subject; but as there are many who may not have the opportunity or leisure to refer to them, and as it is possible, however clear they may be, that different persons may place different interpretations on their meaning, I will, in order that my sentiments may be fully known, and to avoid all ambiguity, proceed to state, summarily, the doctrines which I conceive they embrace.

The great and leading principle is that the General Government emanated from the people of the several States, forming distinct political communities, and acting in their separate and sovereign capacity, and not from all of the people forming one aggregate political community; that the Constitution of the United States is, in fact, a compact, to

which each State is a party, in the character already described; and that the several States, or parties, have a right to judge of its infractions; and in case of a deliberate, palpable and dangerous exercise of power not delegated, they have the right, in the last resort, to use the language of the Virginia Resolutions, "to interpose for arresting the progress of the evil, and for maintaining, within their respective limits, the authorities, rights, and liberties appertaining to them." This right of interposition, thus solemnly asserted by the State of Virginia, be it called what it may—State right, veto, nullification, or by any other name —I conceive to be the fundamental principle of our system, resting on facts historically as certain as our revolution itself, and deductions as simple and demonstrative as that of any political or moral truth whatever; and I firmly believe that on its recognition depend the stability and safety of our political institutions.

I am not ignorant that those opposed to the doctrine have always, now and formerly, regarded it in a very different light, as anarchical and revolutionary. Could I believe such, in fact, to be its tendency, to me it would be no recommendation. I yield to none, I trust, in a deep and sincere attachment to our political institutions and the union of these States. I never breathed an opposite sentiment; but, on the contrary, I have ever considered them the great instruments of preserving our liberty, and promoting the happiness of ourselves and our posterity; and next to these I have ever held them most dear. Nearly half of my life has been passed in the service of the Union, and whatever public reputation I have acquired is indissolubly identified with it. To be too national has, indeed, been considered by many, even of my friends, my greatest political fault. With these strong feelings of attachment, I have examined, with the utmost care, the bearing of the doctrine in question; and, so far from anarchical or revolutionary, I solemnly believe it to be the only solid foundation of our system, and of the Union itself; and that the opposite doctrine, which denies to the States the right of protecting their reserved powers, and which would vest in the General Government (it matters not through what department) the right of determining, exclusively and finally, the powers delegated to it, is incompatible with the sovereignty of the States, and of the Constitution itself, considered as the basis of a Federal Union. As strong as this language is, it is not stronger than that used by the illustrious Jefferson, who said, to give to the General Government the final and exclusive right to judge of its powers, is to make "its discretion, and not the Con-

stitution, the measure of its powers;" and that "in all cases of compact between parties having no common judge, each party has an equal right to judge for itself, as well of the infraction as of the mode and measure of redress." Language cannot be more explicit, nor can higher authority be adduced.

That different opinions are entertained on this subject, I consider but as an additional evidence of the great diversity of the human intellect. Had not able, experienced, and patriotic individuals, for whom I have the highest respect, taken different views, I would have thought the right too clear to admit of doubt; but I am taught by this, as well as by many similar instances, to treat with deference opinions differing from my own. The error may possibly be with me; but if so, I can only say that, after the most mature and conscientious examination, I have not been able to detect it. But, with all proper deference, I must think that theirs is the error who deny what seems to be an essential tribute of the conceded sovereignty of the States, and who attribute to the General Government a right utterly incompatible with what all acknowledge to be its limited and restricted character: an error originating principally, as I must think, in not duly reflecting on the nature of our institutions, and on what constitutes the only rational object of all political constitutions.

It has been well said by one of the most sagacious men of antiquity, that the object of a constitution is to restrain the government, as that of laws is to restrain individuals. The remark is correct; nor is it less true where the government is vested in a majority, than where it is in a single or a few individuals—in a republic, than a monarchy or aristocracy. No one can have a higher respect for the maxim that the majority ought to govern than I have, taken in its proper sense, subject to the restrictions imposed by the Constitution, and confined to objects in which every portion of the community have similar interests; but it is a great error to suppose, as many do, that the right of a majority to govern is a natural and not a conventional right, and therefore absolute and unlimited. By nature, every individual has the right to govern himself; and governments, whether founded on majorities or minorities, must derive their right from the assent, expressed or implied, of the governed, and be subject to such limitations as they may impose. Where the interests are the same, that is, where the laws that may benefit one will benefit all, or the reverse, it is just and proper to place them under the control of the majority; but where they are dissimilar, so that the law that may

benefit one portion may be ruinous to another, it would be, on the contrary, unjust and absurd to subject them to its will; and such I conceive to be the theory on which our Constitution rests.

That such dissimilarity of interests may exist, it is impossible to doubt. They are to be found in every community, in a greater or less degree, however small or homogeneous; and they constitute everywhere the great difficulty of forming and preserving free institutions. To guard against the unequal action of the laws, when applied to dissimilar and opposing interests, is, in fact, what mainly renders a constitution indispensable; to overlook which, in reasoning on our Constitution, would be to omit the principal element by which to determine its character. Were there no contrariety of interests, nothing would be more simple and easy than to form and preserve free institutions. The right of suffrage alone would be a sufficient guarantee. It is the conflict of opposing interests which renders it the most difficult work of man.

Where the diversity of interests exists in separate and distinct classes of the community, as is the case in England, and was formerly the case in Sparta, Rome and most of the free States of antiquity, the rational constitutional provision is, that each should be represented in the government as a separate estate, with a distinct voice, and a negative on the acts of its co-estates, in order to check their encroachments. In England, the Constitution has assumed expressly this form, while in the governments of Sparta and Rome, the same thing was effected under different, but not much less efficacious forms. The perfection of their organization, in this particular, was that which gave to the constitutions of these renowned States all their celebrity, which secured their liberty for so many centuries, and raised them to so great a height of power and prosperity. Indeed, a constitutional provision giving to the great and separate interests of the community the right of self-protection, must appear, to those who will duly reflect on the subject, not less essential to the preservation of liberty than the right of suffrage itself. They, in fact, have a common object, to effect which the one is as necessary as the other to secure responsibility; that is, that those who make and execute the laws should be accountable to those on whom the laws in reality operate—the only solid and durable foundation of liberty. If, without the right of suffrage, our rulers would oppress us, so, without the right of self-protection, the major would equally oppress the minor interests of the community. The absence of the former would make the governed the slaves of the rulers; and of the latter, the feebler interests, the victim of the stronger.

Happily for us, we have no artificial and separate classes of society. We have wisely exploded all such distinctions; but we are not, on that account, exempt from all contrariety of interests, as the present distracted and dangerous condition of our country, unfortunately, but too clearly proves. With us they are almost exclusively geographical, resulting mainly from difference of climate, soil, situation, industry, and production; but are not, therefore, less necessary to be protected by an adequate constitutional provision, than where the distinct interests exist in separate classes. The necessity is, in truth, greater, as such separate and dissimilar geographical interests are more liable to come into conflict, and more dangerous, when in that state, than those of any other description: so much so, that ours is the first instance on record where they have not formed, in an extensive territory, separate and independent communities, or subjected the whole to despotic sway. That such may not be our unhappy fate also, must be the sincere prayer of every lover of his country.

So numerous and diversified are the interests of our country, that they could not be fairly represented in a single government, organized so as to give each great and leading interest a separate and distinct voice, as in governments to which I have referred. A plan was adopted better suited to our situation, but perfectly novel in its character. The powers of government were divided, not as heretofore, in reference to classes, but geographically. One General Government was formed for the whole, to which were delegated all the powers supposed to be necessary to regulate the interests common to all the States, leaving others subject to the separate control of the States, being, from their local and peculiar character, such that they could not be subject to the will of a majority of the whole Union, without the certain hazard of injustice and oppression. It was thus that the interests of the whole were subjected, as they ought to be, to the will of the whole, while the peculiar and local interests were left under the control of the States separately, to whose custody only they could be safely confided. This distribution of power, settled solemnly by a constitutional compact, to which all the States are parties, constitutes the peculiar character and excellence of our political system. It is truly and emphatically American, without example or parallel.

To realize its perfection, we must view the General Government and those of the States as a whole, each in its proper sphere independent; each perfectly adapted to its respective objects; the States acting sep-

arately, representing and protecting the local and peculiar interests; and acting jointly through one General Government, with the weight respectively assigned to each by the Constitution, representing and protecting the interest of the whole; and thus perfecting by an admirable but simple arrangement, the great principle of representation and responsibility, without which no government can be free or just. To preserve this sacred distribution as originally settled, by coercing each to move in its prescribed orbit, is the great and difficult problem, on the solution of which the duration of our Constitution, of our Union, and, in all probability, our liberty depends. How is this to be effected?

The question is new, when applied to our peculiar political organization, where the separate and conflicting interests of society are represented by distinct but connected governments; but it is, in reality, an old question under a new form, long since perfectly solved. Whenever separate and dissimilar interests have been separately represented in any government; whenever the sovereign power has been divided in its exercise, the experience and wisdom of ages have devised but one mode by which such political organization can be preserved—the mode adopted in England, and by all governments, ancient and modern, blessed with constitutions deserving to be called free—to give to each co-estate the right to judge of its powers, with a negative or veto on the acts of the others, in order to protect against encroachments the interests it particularly represents: a principle which all of our constitutions recognize in the distribution of power among their respective departments, as essential to maintain the independence of each; but which, to all who will duly reflect on the subject, must appear far more essential, for the same object, in that great and fundamental distribution of powers between the General and State Governments. So essential is the principle that, to withhold the right from either, where the sovereign power is divided, is, in fact, to annul the division itself, and to consolidate, in the one left in the exclusive possession of the right, all powers of government; for it is not possible to distinguish, practically, between a government having all power, and one having the right to take what powers it pleases. Nor does it in the least vary the principle, whether the distribution of power be between co-estates, as in England, or between distinctly organized but connected governments, as with us. The reason is the same in both cases, while the necessity is greater in our case, as the danger of conflict is greater where the interests of a society are divided geographically than in any other, as has already been shown.

These truths do seem to me to be incontrovertible; and I am at a loss to understand how anyone, who has maturely reflected on the nature of our institutions, or who has read history or studied the principles of free government to any purpose, can call them in question. The explanation must, it appears to me, be sought in the fact that, in every free State there are those who look more to the necessity of maintaining power than guarding against its abuses. I do not intend reproach, but simply to state a fact apparently necessary to explain the contrariety of opinions among the intelligent, where the abstract consideration of the subject would seem scarcely to admit of doubt. If such be the true cause, I must think the fear of weakening the government too much, in this case, to be in a great measure unfounded, or, at least, that the danger is much less from that than the opposite side. I do not deny that a power of so high a nature may be abused by a State; but when I reflect that the States unanimously called the General Government into existence with all its powers, which they freely delegated on their part, under the conviction that their common peace, safety, and prosperity required it; that they are bound together by a common origin, and the recollection of common suffering and common triumph in the great and splendid achievement of their independence; and that the strongest feelings of our nature, and among them the love of national power and distinction, are on the side of the Union, it does seem to me that the fear which would strip the States of their sovereignty, and degrade them, in fact, to mere dependent corporations, lest they should abuse a right indispensable to the peaceable protection of those interests which they reserved under their own peculiar guardianship when they created the General Government, is unnatural and unreasonable. If those who voluntarily created the system cannot be trusted to preserve it, who can?

So far from extreme danger, I hold that there never was a free State in which this great conservative principle, indispensable to all, was ever so safely lodged. In others, when the co-estates representing the dissimilar and conflicting interests of the community came into contact, the only alternative was compromise, submission, or force. Not so in ours. Should the General Government and a State come into conflict, we have a higher remedy: the power which called the General Government into existence, which gave it all its authority, and can enlarge, contract, or abolish its powers at its pleasure, may be invoked. The States themselves may be appealed to—three-fourths of which, in

fact, form a power, whose decrees are the Constitution itself, and whose voice can silence all discontent. The utmost extent, then, of the power is, that a State, acting in its sovereign capacity as one of the parties to the constitutional compact, may compel the Government, created by that compact, to submit a question touching its infraction, to the parties who created it; to avoid the supposed dangers of which, it is proposed to resort to the novel, the hazardous, and, I must add, fatal project of giving to the General Government the sole and final right of interpreting the Constitution—thereby reversing the whole system, making that instrument the creature of its will, instead of a rule of action impressed on it at its creation, and annihilating, in fact, the authority which imposed it, and from which the Government itself derives its existence.

That such would be the result, were the right in question vested in the legislative or executive branch of the Government, is conceded by all. No one has been so hardy as to assert that Congress or the President ought to have the right, or deny that, if vested finally and exclusively in either, the consequences which I have stated would necessarily follow; but its advocates have been reconciled to the doctrine, on the supposition that there is one department of the General Government which, from its peculiar organization, affords an independent tribunal, through which the Government may exercise the high authority which is the subject of consideration, with perfect safety to all.

I yield, I trust, to few in my attachment to the Judiciary Department. I am fully sensible of its importance, and would maintain it, to the fullest extent, in its constitutional powers and independence; but it is impossible for me to believe it was ever intended by the Constitution that it should exercise the power in question, or that it is competent to do so; and, if it were, that it would be a safe depository of the power.

Its powers are judicial, and not political; and are expressly confined by the Constitution "to all cases in law and equity arising under this Constitution, the laws of the United States, and the treaties made, or which shall be made, under its authority;" and which I have high authority in asserting excludes political questions, and comprehends those only where there are parties amenable to the process of the court. Nor is its incompetency less clear than its want of constitutional authority. There may be many, and the most dangerous infractions on the part of Congress, of which, it is conceded by all, the court, as a judicial tribunal, cannot, from its nature, take cognizance. The tariff itself is a strong case in point; and the reason applies equally to all others where

Congress perverts a power from an object intended, to one not intended, the most insidious and dangerous of all infractions; and which may be extended to all of its powers, more especially to the taxing and appropriating. But, supposing it competent to take cognizance of all infractions of every description, the insuperable objection still remains, that it would not be a safe tribunal to exercise the power in question.

It is a universal and fundamental political principle, that the power to protect can safely be confided only to those interested in protecting, or their responsible agents—a maxim not less true in private than in public affairs. The danger in our system is, that the General Government, which represents the interests of the whole, may encroach on the States, which represent the peculiar and local interests, or that the latter may encroach on the former.

In examining this point, we ought not to forget that the Government, through all its departments, judicial as well as others, is administered by delegated and responsible agents; and that the power which really controls, ultimately, all the movements, is not in the agents, but those who elect or appoint them. To understand, then, its real character, and what would be the action of the system in any supposable case, we must raise our view from the mere agents to this high controlling power, which finally impels every movement of the machine. By doing so, we shall find all under the control of the will of a majority, compounded of the majority of the States, taken as political bodies, and the majority of the people of the States, estimated in federal numbers. These, united, constitute the real and final power which impels and directs the movements of the General Government. The majority of the States elect the majority of the Senate; of the people of the States, that of the House of Representatives; the two united, the President; and the President and a majority of the Senate appoint the judges: a majority of whom, and a majority of the Senate and House, with the President, really exercise all the powers of the Government, with the exception of the cases where the Constitution requires a greater number than a majority. The judges are, in fact, as truly the judicial representatives of this united majority, as the majority of Congress itself, or the President, is its legislative or executive representative; and to confide the power to the judiciary to determine finally and conclusively what powers are delegated and what reserved, would be, in reality, to confide it to the majority, whose agents they are, and by whom they can be controlled in various ways; and, of course, to subject (against

the fundamental principle of our system and all sound political reasoning) the reserved powers of the States, with all the local and peculiar interests they were intended to protect, to the will of the very majority against which the protection was intended. Nor will the tenure by which the judges hold their office, however valuable the provision in many other respects, materially vary the case. Its highest possible effect would be to retard, and not finally to resist, the will of a dominant majority.

But it is useless to multiply arguments. Were it possible that reason could settle a question where the passions and interests of men are concerned, this point would have been long since settled forever by the State of Virginia. The report of her legislature, to which I have already referred, has really, in my opinion, placed it beyond controversy. Speaking in reference to this subject, it says: "It has been objected" (to the right of a State to interpose for the protection of her reserved rights) "that the judicial authority is to be regarded as the sole expositor of the Constitution. On this objection it might be observed, first, that there may be instances of usurped powers which the forms of the Constitution could never draw within the control of the Judicial Department; secondly, that if the decision of the judiciary be raised above the sovereign parties to the Constitution, the decisions of the other departments, not carried by the forms of the Constitution before the Judiciary, must be equally authoritative and final with the decision of that department. But the proper answer to the objection is, that the resolution of the General Assembly relates to those great and extraordinary cases, in which all the forms of the Constitution may prove ineffectual against infractions dangerous to the essential rights of the parties to it. The resolution supposes that dangerous powers, not delegated, may not only be usurped and executed by the other departments, but that the Judicial Department may also exercise or sanction dangerous powers, beyond the grant of the Constitution, and, consequently, that the ultimate right of the parties to the Constitution to judge whether the compact has been dangerously violated, must extend to violations by one delegated authority, as well as by another—by the judiciary, as well as by the executive or legislative."

Against these conclusive arguments, as they seem to me, it is objected that, if one of the parties has the right to judge of infractions of the Constitution, so has the other; and that, consequently, in cases of contested powers between a State and the General Government, each

would have a right to maintain its opinion, as is the case when sovereign powers differ in the construction of treaties or compacts; and that, of course, it would come to be a mere question of force. The error is in the assumption that the General Government is a party to the constitutional compact. The States, as has been shown, formed the compact, acting as sovereign and independent communities. The General Government is but its creature; and though in reality a government, with all the rights and authority which belong to any other government, within the orbit of its powers, it is, nevertheless, a government emanating from a compact between sovereigns, and partaking, in its nature and object, of the character of a joint commission, appointed to superintend and administer the interests in which all are jointly concerned; but having, beyond its proper sphere, no more power than if it did not exist. To deny this would be to deny the most incontestable facts and the clearest conclusions; while to acknowledge its truth is to destroy utterly the objection that the appeal would be to force, in the case supposed. For, if each party has a right to judge, then, under our system of government, the final cognizance of a question of contested power would be in the States, and not in the General Government. It would be the duty of the latter, as in all similar cases of a contest between one or more of the principals and a joint commission or agency, to refer the contest to the principals themselves. Such are the plain dictates of both reason and analogy. On no sound principle can the agents have a right to final cognizance, as against the principals, much less to use force against them to maintain their construction of their powers. Such a right would be monstrous, and has never heretofore been claimed in similar cases.

That the doctrine is applicable to the case of a contested power between the States and the General Government, we have the authority, not only of reason and analogy, but of the distinguished statesman already referred to. Mr. Jefferson, at a late period of his life, after long experience and mature reflection, says, "With respect to our State and Federal Governments, I do not think their relations are correctly understood by foreigners. They suppose the former are subordinate to the latter. This is not the case. They are co-ordinate departments of one simple and integral whole. But you may ask, If the two departments should claim each the same subject of power, where is the umpire to decide between them? In cases of little urgency or importance, the prudence of both parties will keep them aloof from the questionable ground; but, if it can neither be avoided nor compromised, a convention

of the States must be called to ascribe the doubtful power to that department which they may think best."

It is thus that our Constitution, by authorizing amendments, and by prescribing the authority and mode of making them, has, by a simple contrivance, with its characteristic wisdom, provided a power which, in the last resort, supersedes effectually the necessity, and even the pretext for force: a power to which none can fairly object; with which the interests of all are safe; which can definitively close all controversies in the only effectual mode, by freeing the compact of every defect and uncertainty, by an amendment of the instrument itself. It is impossible for human wisdom, in a system like ours, to devise another mode which shall be safe and effectual, and at the same time consistent with what are the relations and acknowledged powers of the two great departments of our Government. It gives a beauty and security peculiar to our system, which, if duly appreciated, will transmit its blessings to the remotest generations; but, if not, our splendid anticipations of the future will prove but an empty dream. Stripped of all its covering, the naked question is, whether ours is a federal or a consolidated government; a constitutional or absolute one; a government resting ultimately on the solid basis of the sovereignty of the States or on the unrestrained will of a majority; a form of government, as in all other unlimited ones, in which injustice, and violence, and force must finally prevail. Let it never be forgotten that, where the majority rules without restriction, the minority is the subject; and that, if we should absurdly attribute to the former the exclusive right of construing the Constitution, there would be, in fact, between the sovereign and subject, under such a government, no Constitution, or, at least, nothing deserving the name, or serving the legitimate object of so sacred an instrument.

How the States are to exercise this high power of interposition, which constitutes so essential a portion of their reserved rights that it cannot be delegated without an entire surrender of their sovereignty, and converting our system from a federal into a consolidated Government, is a question that the States only are competent to determine. The arguments which prove that they possess the power, equally prove that they are, in the language of Jefferson, "the rightful judges of the mode and measure of redress." But the spirit of forbearance, as well as the nature of the right itself, forbids a recourse to it, except in cases of dangerous infractions of the Constitution; and then only in the last resort, when all reasonable hope of relief from the ordinary action of

Pacific Bible Seminary
4835 East Anaheim Street
Long Beach 4, Calif.

the Government has failed; when, if the right to interpose did not exist, the alternative would be submission and oppression on one side, or resistance by force on the other. That our system should afford, in such extreme cases, an intermediate point between these dire alternatives, by which the Government may be brought to a pause, and thereby an interval obtained to compromise differences, or, if impracticable, be compelled to submit the question to a constitutional adjustment, through an appeal to the States themselves, is an evidence of its high wisdom: an element not, as is supposed by some, of weakness, but of strength; not of anarchy or revolution, but of peace and safety. Its general recognition would of itself, in a great measure, if not altogether, supersede the necessity of its exercise, by impressing on the movements of the Government that moderation and justice so essential to harmony and peace, in a country of such vast extent and diversity of interests as ours; and would, if controversy should come, turn the resentment of the aggrieved from the system to those who had abused its powers (a point all-important), and cause them to seek redress, not in revolution or overthrow, but in reformation. It is, in fact, properly understood, a substitute—where the alternative would be force—tending to prevent, and, if that fails, to correct peaceably the aberrations to which all systems are liable, and which, if permitted to accumulate without correction, must finally end in a general catastrophe.

I have now said what I intended in reference to the abstract question of the relation of the States to the General Government, and would here conclude, did I not believe that a mere general statement on an abstract question, without including that which may have caused its agitation, would be considered by many imperfect and unsatisfactory. Feeling that such would be justly the case, I am compelled, reluctantly, to touch on the tariff, so far, at least, as may be necessary to illustrate the opinions which I have already advanced. Anxious, however, to intrude as little as possible on the public attention, I will be as brief as possible; and with that view will, as far as may be consistent with my object, avoid all debatable topics.

Whatever diversity of opinion may exist in relation to the principle, or the effect on the productive industry of the country, of the present, or any other tariff of protection, there are certain political consequences flowing from the present which none can doubt, and all must deplore. It would be in vain to attempt to conceal, that it has divided the country into two great geographical divisions, and arrayed them against each

other, in opinion at least, if not interests also, on some of the most vital of political subjects—on its finance, its commerce, and its industry—subjects calculated, above all others, in time of peace, to produce excitement, and in relation to which the tariff has placed the sections in question in deep and dangerous conflict. If there be any point on which the (I was going to say, southern section, but to avoid, as far as possible, the painful feelings such discussions are calculated to excite, I shall say) weaker of the two sections is unanimous, it is, that its prosperity depends, in a great measure, on free trade, light taxes, economical, and, as far as possible, equal disbursements of the public revenue, and unshackled industry—leaving them to pursue whatever may appear most advantageous to their interests. From the Potomac to the Mississippi, there are few, indeed, however divided on other points, who would not, if dependent on their volition, and if they regarded the interest of their particular section only, remove from commerce and industry every shackle, reduce the revenue to the lowest point that the wants of the Government fairly required, and restrict the appropriations to the most moderate scale consistent with the peace, the security, and the engagements of the public; and who do not believe that the opposite system is calculated to throw on them an unequal burden, to repress their prosperity, and to encroach on their enjoyment.

On all these deeply-important measures, the opposite opinion prevails, if not with equal unanimity, with at least a greatly preponderating majority, in the other and stronger section; so much so, that no two distinct nations ever entertained more opposite views of policy than these two sections do, on all the important points to which I have referred. Nor is it less certain that this unhappy conflict, flowing directly from the tariff, has extended itself to the halls of legislation, and has converted the deliberations of Congress into an annual struggle between the two sections; the stronger to maintain and increase the superiority it has already acquired, and the other to throw off or diminish its burdens: a struggle in which all the noble and generous feelings of patriotism are gradually subsiding into sectional and selfish attachments. Nor has the effect of this dangerous conflict ended here. It has not only divided the two sections on the important point already stated, but on the deeper and more dangerous questions, the constitutionality of a protective tariff, and the general principles and theory of the Constitution itself: the stronger, in order to maintain their superiority, giving a construction to the instrument which the other believes would

convert the General Government into a consolidated, irresponsible government, with the total destruction of liberty; and the weaker, seeing no hope of relief with such an assumption of powers, turning its eye to the reserved sovereignty of the States, as the only refuge from oppression. I shall not extend these remarks, as I might, by showing that, while the effect of the system of protection was rapidly alienating one section, it was not less rapidly, by its necessary operation, distracting and corrupting the other; and, between the two, subjecting the administration to violent and sudden changes, totally inconsistent with all stability and wisdom in the management of the affairs of the nation, of which we already see fearful symptoms. Nor do I deem it necessary to inquire whether this unhappy conflict grows out of true or mistaken views of interest on either or both sides. Regarded in either light, it ought to admonish us of the extreme danger to which our system is exposed, and the great moderation and wisdom necessary to preserve it. If it comes from mistaken views—if the interests of the two sections, as affected by the tariff, be really the same, and the system, instead of acting unequally, in reality diffuses equal blessings, and imposes equal burdens on every part—it ought to teach us how liable those who are differently situated, and who view their interests under different aspects, are to come to different conclusions, even when their interests are strictly the same; and, consequently, with what extreme caution any system of policy ought to be adopted, and with what a spirit of moderation pursued, in a country of such great extent and diversity as ours. But if, on the contrary, the conflict springs really from contrariety of interests—if the burden be on one side and the benefit on the other—then are we taught a lesson not less important, how little regard we have for the interests of others while in pursuit of our own; or, at least, how apt we are to consider our own interest the interest of all others; and, of course, how great the danger, in a country of such acknowledged diversity of interests, of the oppression of the feebler by the stronger interest, and, in consequence of it, of the most fatal sectional conflicts. But whichever may be the cause, the real or supposed diversity of interest, it cannot be doubted that the political consequences of the prohibitory system, be its effects in other respects beneficial or otherwise, are really such as I have stated; nor can it be doubted that a conflict between the great sections, on questions so vitally important, indicates a condition of the country so distempered and dangerous, as to demand the most serious and prompt attention. It is only when we come to

consider of the remedy that, under the aspect I am viewing the subject, there can be, among the informed and considerate, any diversity of opinion.

Those who have not duly reflected on its dangerous and inveterate character, suppose that the disease will cure itself; that events ought to be left to take their own course; and that experience, in a short time, will prove that the interest of the whole community is the same in reference to the tariff, or, at least, whatever diversity there may now be, time will assimilate. Such has been their language from the beginning, but, unfortunately, the progress of events has been the reverse. The country is now more divided than in 1824, and then more than in 1816. The majority may have increased, but the opposite sides are, beyond dispute, more determined and excited than at any preceding period. Formerly, the system was resisted mainly as inexpedient; but now, as unconstitutional, unequal, unjust, and oppressive. Then, relief was sought exclusively from the General Government; but now, many, driven to despair, are raising their eyes to the reserved sovereignty of the States as the only refuge. If we turn from the past and present to the future, we shall find nothing to lessen, but much to aggravate the danger. The increasing embarrassment and distress of the staple States, the growing conviction, from experience, that they are caused by the prohibitory system principally, and that, under its continued operation, their present pursuits must become profitless, and with a conviction that their great and peculiar agricultural capital cannot be diverted from its ancient and hereditary channels without ruinous losses—all concur to increase, instead of dispelling, the gloom that hangs over the future. In fact, to those who will duly reflect on the subject, the hope that the disease will cure itself must appear perfectly illusory. The question is in reality one between the exporting and the non-exporting interests of the country. Were there no exports, there would be no tariff. It would be perfectly useless. On the contrary, as long as there are States which raise the great agricultural staples with the view of obtaining their supplies, and which must depend on the general market of the world for their sales, the conflict must remain if the system should continue, and the disease become more and more inveterate. Their interest, and that of those who, by high duties, would confine the purchase of their supplies to the home market, must, from the nature of things, in reference to the tariff, be in conflict. Till, then, we cease to raise the great staples, cotton, rice, and tobacco, for the general market, and till we can find

some other profitable investment for the immense amount of capital and labor now employed in their production, the present unhappy and dangerous conflict cannot terminate, unless with the prohibitory system itself.

In the meantime, while idly waiting for its termination through its own action, the progress of events in another quarter is rapidly bringing the contest to an immediate and decisive issue. We are fast approaching a period very novel in the history of nations, and bearing directly and powerfully on the point under consideration—the final payment of a long-standing funded debt—a period that cannot be greatly retarded, or its natural consequences eluded, without proving disastrous to those who attempt either, if not to the country itself. When it arrives, the Government will find itself in possession of a surplus revenue of $10,000,000 or $12,000,000, if not previously disposed of—which presents the important question, What previous disposition ought to be made? a question which must press urgently for decision at the very next session of Congress. It cannot be delayed longer without the most distracting and dangerous consequences.

The honest and obvious course is to prevent the accumulation of the surplus in the Treasury by a timely and judicious reduction of the impost; and thereby to leave the money in the pockets of those who made it, and from whom it cannot be honestly nor constitutionally taken, unless required by the fair and legitimate wants of the Government. If, neglecting a disposition so obvious and just, the Government should attempt to keep up its present high duties, when the money is no longer wanted, or to dispose of this immense surplus by enlarging the old, or devising new schemes of appropriations; or, finding that to be impossible, it should adopt the most dangerous, unconstitutional and absurd project ever devised by any government, of dividing the surplus among the States—a project which, if carried into execution, would not fail to create an antagonist interest between the States and General Government on all questions of appropriations, which would certainly end in reducing the latter to a mere office of collection and distribution—either of these modes would be considered, by the section suffering under the present high duties, as a fixed determination to perpetuate forever what it considers the present unequal, unconstitutional, and oppressive burden; and from that moment it would cease to look to the General Government for relief. This deeply-interesting period, which must prove so disastrous should a wrong direction be given, but so fortunate and glo-

rious, should a right one, is just at hand. The work must commence at the next session, as I have stated, or be left undone, or, at least, be badly done. The succeeding session would be too short, and too much agitated by the presidential contest, to afford the requisite leisure and calmness; and the one succeeding would find the country in the midst of the crisis, when it would be too late to prevent an accumulation of the surplus; which I hazard nothing in saying, judging from the nature of men and government, if once permitted to accumulate, would create an interest strong enough to perpetuate itself, supported, as it would be, by others so numerous and powerful; and thus would pass away a moment, never to be quietly recalled, so precious, if properly used, to lighten the public burden; to equalize the action of the Government; to restore harmony and peace; and to present to the world the illustrious example, which could not fail to prove most favorable to the great cause of liberty everywhere, of a nation the freest, and, at the same time, the best and mostly cheaply governed; of the highest earthly blessing at the least possible sacrifice.

As the disease will not, then, heal itself, we are brought to the question, Can a remedy be applied? and if so, what ought it to be?

To answer in the negative would be to assert that our Union has utterly failed; and that the opinion, so common before the adoption of our Constitution, that a free government could not be practically extended over a large country, was correct; and that ours had been destroyed by giving it limits so great as to comprehend, not only dissimilar, but irreconcilable interests. I am not prepared to admit a conclusion that would cast so deep a shade on the future; and that would falsify all the glorious anticipations of our ancestors, while it would so greatly lessen their high reputation for wisdom. Nothing but the clearest demonstration founded on actual experience, will ever force me to a conclusion so abhorrent to all my feelings. As strongly as I am impressed with the great dissimilarity, and, as I must add, as truth compels me to, contrariety of interests in our country, resulting from the causes already indicated, and which are so great that they cannot be subjected to the unchecked will of a majority of the whole without defeating the great end of government, and without which it is a curse—justice—yet I see in the Union, as ordained by the Constitution, the means, if wisely used, not only of reconciling all diversities, but also the means, and the only effectual one, of securing to us justice, peace, and security, at home and abroad, and with them that national power and renown,

the love of which Providence has implanted, for wise purposes, so deeply in the human heart: in all of which great objects every portion of our country, widely extended and diversified as it is, has a common and identical interest. If we have the wisdom to place a proper relative estimate on these more elevated and durable blessings, the present and every other conflict of like character may be readily terminated; but if, reversing the scale, each section should put a higher estimate on its immediate and peculiar gains, and, acting in that spirit, should push favorite measures of mere policy, without some regard to peace, harmony, or justice, our sectional conflicts would then, indeed, without some constitutional check, become interminable, except by the dissolution of the Union itself. That we have, in fact, so reversed the estimate, is too certain to be doubted, and the result is our present distempered and dangerous condition. The cure must commence in the correction of the error; and not to admit that we have erred would be the worst possible symptom. It would prove the disease to be incurable, through the regular and ordinary process of legislation; and would compel, finally, a resort to extraordinary, but I still trust, not only constitutional, but safe remedies.

No one would more sincerely rejoice than myself to see the remedy applied from the quarter where it could be most easily and regularly done. It is the only way by which those, who think that it is the only quarter from which it may constitutionally come, can possibly sustain their opinion. To omit the application by the General Government, would compel even them to admit the truth of the opposite opinion, or force them to abandon our political system in despair; while, on the other hand, all their enlightened and patriotic opponents would rejoice at such evidence of moderation and wisdom, on the part of the General Government, as would supersede a resort to what they believe to be the higher powers of our political system, as indicating a sounder state of public sentiment than has ever heretofore existed in any country; and thus affording the highest possible assurance of the perpetuation of our glorious institutions to the latest generation. For, as a people advance in knowledge, in the same degree they may dispense with mere artificial restrictions in their government; and we may imagine (but dare not expect to see) a state of intelligence so universal and high, that all the guards of liberty may be dispensed with, except an enlightened public opinion, acting through the right of suffrage; but it presupposes a state where every class and every section of the community are capable of

estimating the effects of every measure, not only as it may affect itself, but every other class and section; and of fully realizing the sublime truth that the highest and wisest policy consists in maintaining justice, and promoting peace and harmony; and that, compared to these, schemes of mere gain are but trash and dross. I fear experience has already proved that we are far removed from such a state; and that we must, consequently, rely on the old and clumsy, but approved mode of checking power, in order to prevent or correct abuses; but I do trust that, though far from perfect, we are, at least, so much so as to be capable of remedying the present disorder in the ordinary way; and thus to prove that, with us, public opinion is so enlightened, and our political machine so perfect, as rarely to require for its preservation the intervention of the power that created it. How is this to be effected?

The application may be painful, but the remedy, I conceive, is certain and simple. There is but one effectual cure—an honest reduction of the duties to a fair system of revenue, adapted to the just and constitutional wants of the Government. Nothing short of this will restore the country to peace, harmony and mutual affection. There is already a deep and growing conviction in a large section of the country that the impost, even as a revenue system, is extremely unequal, and that it is mainly paid by those who furnish the means of paying the foreign exchanges of the country on which it is laid; and that the case would not be varied, taking into the estimate the entire action of the system, whether the producer or consumer pays in the first instance.

I do not propose to enter formally into the discussion of a point so complex and contested; but, as it has necessarily a strong practical bearing on the subject under consideration in all its relations, I cannot pass it without a few general and brief remarks.

If the producer, in reality, pays, none will doubt but the burden would mainly fall on the section it is supposed to do. The theory that the consumer pays, in the first instance, renders the proposition more complex, and will require, in order to understand where the burden, in reality, ultimately falls, on that supposition, to consider the protective, or, as its friends call it, the American system, under its three-fold aspect of taxation, of protection, and of distribution—or as performing, at the same time, the several functions of giving a revenue to the Government, of affording protection to certain branches of domestic industry, and furnishing means to Congress of distributing large sums through its appropriations: all of which are so blended in their effects, that it is

impossible to understand its true operation without taking the whole into the estimate.

Admitting, then, as supposed, that he who consumes the article pays the tax in the increased price, and that the burden falls wholly on the consumers, without affecting the producers as a class (which, by the by, is far from being true, except in the single case, if there be such a one, where the producers have a monopoly of an article so indispensable to life that the quantity consumed cannot be affected by any increase of price), and that, considered in the light of a tax merely, the impost duties fall equally on every section in proportion to its population, still, when combined with its other effects, the burden it imposes as a tax may be so transferred from one section to the other as to take it from one and place it wholly on the other. Let us apply the remark first to its operation as a system of protection.

The tendency of the tax or duty on the imported article is not only to raise its price, but also, in the same proportion, that of the domestic article of the same kind, for which purpose, when intended for protection, it is, in fact, laid; and, of course, in determining where the system ultimately places the burden in reality, this effect, also, must be taken into the estimate. If one of the sections exclusively produces such domestic articles, and the other purchases them from it, then it is clear that, to the amount of such increased prices, the tax or duty on the consumption of foreign articles would be transferred from the section producing the domestic articles to the one that purchased and consumed them—unless the latter, in turn, be indemnified by the increased price of the objects of its industry, which none will venture to assert to be the case with the great staples of the country, which form the basis of our exports, the price of which is regulated by the foreign, and not the domestic market. To those who grow them, the increased price of the foreign and domestic articles both, in consequence of the duty on the former, is in reality, and in the strictest sense, a tax, while it is clear that the increased price of the latter acts as a bounty to the section producing them; and that, as the amount of such increased prices on what it sells to the other section is greater or less than the duty it pays on the imported articles, the system will, in fact, operate as a bounty or tax: if greater, the difference would be bounty; if less, a tax.

Again, the operation may be equal in every other respect, and yet the pressure of the system, relatively, on the two sections, be rendered very unequal by the appropriations or distribution. If each section

receives back what it paid into the treasury, the equality, if it previously existed, will continue; but if one receives back less, and the other proportionably more than is paid, then the difference in relation to the sections will be to the former a loss, and to the latter a gain; and the system, in this aspect, would operate to the amount of the difference, as a contribution from the one receiving less than it paid to the other that receives more. Such would be incontestably its general effects, taken in all its different aspects, even on the theory supposed to be most favorable to prove the equal action of the system, that the consumer pays, in the first instance, the whole amount of the tax.

To show how, on this supposition, the burden and advantages of the system would actually distribute themselves between the sections, would carry me too far into details; but I feel assured, after full and careful examination, that they are such as to explain, what otherwise would seem inexplicable, that one section should consider its repeal a calamity, and the other a blessing; and that such opposite views should be taken by them as to place them in a state of determined conflict in relation to the great fiscal and commercial interest of the country. Indeed, were there no satisfactory explanation, the opposite views that prevail in the two sections, as to the effects of the system, ought to satisfy all of its unequal action. There can be no safer, or more certain rule, than to suppose each portion of the country equally capable of understanding their respective interests, and that each is a much better judge of the effects of any system or measures on its peculiar interests than the other can possibly be.

But, whether the opinion of its unequal action be correct or erroneous, nothing can be more certain than that the impression is widely extending itself, that the system, under all its modifications, is essentially unequal; and if to this be added a conviction still deeper and more universal, that every duty imposed for the purpose of protection is not only unequal, but also unconstitutional, it would be a fatal error to suppose that any remedy, short of that which I have stated, can heal our political disorders.

In order to understand more fully the difficulty of adjusting this unhappy contest on any other ground, it may not be improper to present a general view of the constitutional objection, that it may be clearly seen how hopeless it is to expect that it can be yielded by those who have embraced it.

They believe that all the powers vested by the Constitution in Con-

gress are not only restricted by the limitations expressly imposed, but also by the nature and object of the powers themselves. Thus, though the power to impose duties on imports be granted in general terms, without any other express limitations but that they shall be equal, and no preference shall be given to the ports of one state over those of another, yet, as being a portion of the taxing power given with the view of raising revenue, it is, from its nature, restricted to that object, as much so as if the Convention had expressly so limited it; and that to use it to effect any other purpose not specified in the Constitution, is an infraction of the instrument in its most dangerous form—an infraction by perversion, more easily made, and more difficult to resist, than any other. The same view is believed to be applicable to the power of regulating commerce, as well as all the other powers. To surrender this important principle, it is conceived, would be to surrender all power, and to render the Government unlimited and despotic; and to yield it up, in relation to the particular power in question, would be, in fact, to surrender the control of the whole industry and capital of the country to the General Government, and would end in placing the weaker section in a colonial relation towards the stronger. For nothing are more dissimilar in their nature, or may be more unequally affected by the same laws, than different descriptions of labor and property; and if taxes, by increasing the amount and changing the intent only, may be perverted, in fact, into a system of penalties and rewards, it would give all the power that could be desired to subject the labor and property of the minority to the will of the majority, to be regulated without regarding the interest of the former in subserviency to the will of the latter. Thus thinking, it would seem unreasonable to expect that any adjustment, based on the recognition of the correctness of a construction of the Constitution which would admit the exercise of such a power, would satisfy the weaker of two sections, particularly with its peculiar industry and property, which experience has shown may be so injuriously affected by its exercise. Thus much for one side.

The just claim of the other ought to be equally respected. Whatever excitement the system has justly caused in certain portions of our country, I hope and believe all will conceive that the change should be made with the least possible detriment to the interests of those who may be liable to be affected by it; consistently, with what is justly due to others, and the principles of the Constitution. To effect this will require the kindest spirit of conciliation and the utmost skill; but, even

with these, it will be impossible to make the transition without a shock, greater or less, though I trust, if judiciously effected, it will not be without many compensating advantages. That there will be some such cannot be doubted. It will, at least, be followed by greater stability, and will tend to harmonize the manufacturing with all the other great interests of the country, and bind the whole in mutual affection. But these are not all. Another advantage of essential importance to the ultimate prosperity of our manufacturing industry will follow. It will cheapen production; and, in that view, the loss of any one branch will be nothing like in proportion to the reduction of duty on that particular branch. Every reduction will, in fact, operate as a bounty to every other branch except the one reduced; and thus the effect of a general reduction will be to cheapen, universally, the price of production, by cheapening living, wages, and material, so as to give, if not equal profits after the reduction—profits by no means reduced proportionally to the duties—an effect which, as it regards the foreign markets, is of the utmost importance. It must be apparent, on reflection, that the means adopted to secure the home market for our manufactures are precisely the opposite of those necessary to obtain the foreign. In the former, the increased expense of production, in consequence of a system of protection, may be more than compensated by the increased price at home of the article protected; but in the latter, this advantage is lost; and as there is no other corresponding compensation, the increased cost of production must be a dead loss in the foreign market. But whether these advantages, and many others that might be mentioned, will ultimately compensate to the full extent or not the loss to the manufacturers, on the reduction of the duties, certain it is, that we have approached a point at which a great change cannot be much longer delayed; and that the more promptly it may be met, the less excitement there will be, and the greater leisure and calmness for a cautious and skilful operation in making the transition; and which it becomes those more immediately interested duly to consider. Nor ought they to overlook, in considering the question, the different character of the claims of the two sides. The one asks from Government no advantage, but simply to be let alone in the undisturbed possession of their natural advantages, and to secure which, as far as was consistent with the other objects of the Constitution, was one of their leading motives in entering into the Union; while the other side claims, for the advancement of their prosperity, the positive interference of the Government. In such

cases, on every principle of fairness and justice, such interference ought to be restrained within limits strictly compatible with the natural advantages of the other. He who looks to all the causes in operation—the near approach of the final payment of the public debt—the growing disaffection and resistance to the system in so large a section of the country—the deeper principles on which opposition to it is gradually turning—must be, indeed, infatuated not to see a great change is unavoidable; and that the attempt to elude or much longer delay it must, finally, but increase the shock and disastrous consequences which may follow.

In forming the opinions I have expressed, I have not been actuated by an unkind feeling towards our manufacturing interest. I now am, and ever have been, decidedly friendly to them, though I cannot concur in all of the measures which have been adopted to advance them. I believe considerations higher than any question of mere pecuniary interest forbade their use. But subordinate to these higher views of policy, I regard the advancement of mechanical and chemical improvements in the arts with feelings little short of enthusiasm; not only as the prolific source of national and individual wealth, but as the great means of enlarging the domain of man over the material world, and thereby of laying the solid foundation of a highly improved condition of society, morally and politically. I fear not that we shall extend our power too far over the great agents of nature; but, on the contrary, I consider such enlargement of our power as tending more certainly and powerfully to better the condition of our race, than any one of the many powerful causes now operating to that result. With these impressions, I not only rejoice at the general progress of the arts in the world, but in their advancement in our own country; and as far as protection may be incidentally afforded, in the fair and honest exercise of our constitutional powers, I think now, as I have always thought, that sound policy, connected with the security, independence, and peace of the country, requires it should be done; but that we cannot go a single step beyond without jeopardizing our peace, our harmony and our liberty—considerations of infinitely more importance to us than any measure of mere policy can possibly be.

In thus placing my opinions before the public, I have not been actuated by the expectation of changing the public sentiment. Such a motive, on a question so long agitated, and so beset with feelings of prejudice and interest, would argue, on my part, an insufferable vanity,

and a profound ignorance of the human heart. To avoid, as far as possible, the imputation of either, I have confined my statement, on the many and important points on which I have been compelled to touch, to a simple declaration of my opinion, without advancing any other reasons to sustain them than what appeared to me to be indispensable to the full understanding of my views; and if they should, on any point, be thought to be not clearly and explicitly developed, it will, I trust, be attributed to my solicitude to avoid the imputations to which I have alluded, and not from any desire to disguise my sentiments, nor the want of arguments and illustrations to maintain positions, which so abound in both, that it would require a volume to do them anything like justice. I can only hope the truths which, I feel assured, are essentially connected with all that we ought to hold most dear, may not be weakened in the public estimation by the imperfect manner in which I have been, by the object in view, compelled to present them.

With every caution on my part, I dare not hope, in taking the step I have, to escape the imputation of improper motives; though I have, without reserve, freely expressed my opinions, not regarding whether they might or might not be popular. I have no reason to believe that they are such as will conciliate public favor, but the opposite, which I greatly regret, as I have ever placed a high estimate on the good opinion of my fellow-citizens. But, be that as it may, I shall, at least, be sustained by feelings of conscious rectitude. I have formed my opinions after the most careful and deliberate examination, with all the aids which my reason and experience could furnish; I have expressed them honestly and fearlessly, regardless of their effects personally, which, however interesting to me individually, are of too little importance to be taken into the estimate, where the liberty and happiness of our country are so vitally involved.

JOHN C. CALHOUN.

FORT HILL, *July* 26th, 1831.

ROBERT HAYNE

ROBERT HAYNE was born in St. Paul, South Carolina, 1791. He learned law under Langdon Cheves. He became prominent both in law and politics. In 1818 he was made Speaker of the South Carolina legislature and from 1823 to 1832 was United States Senator.

With Calhoun he led the the attempt of South Carolina to introduce the doctrine of Nullification, basing it upon the Kentucky and Virginia Resolutions of 1798 and the theory of the Union as a compact between several States. The great debate between Hayne and Webster on this subject, is the most memorable in the annals of the Senate. Hayne made each individual State the judge for itself of the constitutionality of an act of Congress: Webster, following the lead of Chief Justice Marshall, developed the great principle that the Supreme Court is the final arbiter of the constitutionality of a law.

From 1832 to 1834 Hayne was Governor of South Carolina and one of the most radical advocates of Nullification. He died in 1840.

THE DOCTRINE OF NULLIFICATION

In the course of my former remarks, Mr. President, I took occasion to deprecate, as one of the greatest evils, the consolidation of this government. The gentleman takes alarm at the sound. "Consolidation like the tariff," grates upon his ear. He tells us, "we have heard much of late about consolidation; that it is the rallying word of all who are endeavoring to weaken the Union, by adding to the power of the States." But consolidation (says the gentleman) was the very object for which the Union was formed; and, in support of that opinion, he read a passage from the address of the President of the Convention, to Congress, which he assumes to be authority on his side of the question. But, sir, the gentleman is mistaken. The object of the framers of the Constitution, as disclosed in that address, was not the consolidation of the government, but "the consolidation of the Union." It was not to

draw power from the States, in order to transfer it to a great National Government, but, in the language of the Constitution itself, "to form a more perfect Union,"—and by what means? By "establishing justice, promoting domestic tranquility, and securing the blessings of liberty to ourselves and our posterity." This is the true reading of the Constitution. But, according to the gentleman's reading, the object of the Constitution was to consolidate the Government, and the means would seem to be the promotion of injustice, causing domestic discord, and depriving the States and the people "of the blessings of liberty" forever.

The gentleman boasts of belonging to the party of National Republicans. National Republicans! A new name, sir, for a very old thing. The National Republicans of the present day were the Federalists of '98, who became Federal Republicans during the war of 1812, and were manufactured into National Republicans somewhere about the year 1825.

As a party (by whatever name distinguished), they have always been animated by the same principles, and have kept steadily in view a common object, the consolidation of the government. Sir, the party to which I am proud of having belonged, from the very commencement of my political life to the present day, were the Democrats of '98 (Anarchists, Anti-Federalists, Revolutionists, I think they were sometimes called). They assumed the name of Democratic Republicans in 1822, and have retained their name and principles up to the present hour. True to their political faith, they have always, as a party, been in favor of limitations of power; they have insisted that all powers not delegated to the Federal Government are reserved, and have been constantly struggling, as they now are, to preserve the rights of the States, and to prevent them from being drawn into the vortex, and swallowed up by one great consolidating government.

Sir, anyone acquainted with the history of parties in this country, will recognize in the points now in dispute between the senator from Massachusetts and myself, the very grounds which have, from the beginning, divided the two great parties of this country, and which (call these parties by what names you will, and amalgamate them as you may,), will divide them forever. The true distinction between those parties is laid down in a celebrated manifesto, issued by the convention of the Federalists of Massachusetts, assembled in Boston in February, 1824, on the occasion of organizing a party opposition to the re-election of Governor Eustis. The gentleman will recognize this as the "canonical book of political scripture;" and it instructs us that, "when the

American colonies redeemed themselves from British bondage, and became so many independent nations, they proposed to form a National Union—(not a Federal Union, sir, but a National Union). Those who were in favor of a union of the States in this form became known by the name of Federalists; those who wanted no union of the States, or disliked the proposed form of union, became known by the name of Anti-Federalists. By means which need not be enumerated, the Anti-Federalists became (after the expiration of twelve years) our national rulers, and, for a period of sixteen years, until the close of Mr. Madison's administration in 1817, continued to exercise the exclusive direction of our public affairs. Here, sir, is the true history of the origin, rise, and progress of the party of National Republicans, who date back to the very origin of the government, and who then, as now, chose to consider the Constitution as having created, not a Federal, but a National Union; who regarded "consolidation" as no evil, and who doubtless consider it "a consummation devoutly to be wished" to build up a great "central government," "one and indivisible." Sir, there have existed, in every age and every country, two distinct orders of men—the lovers of freedom, and the devoted advocates of power.

The same great leading principles, modified only by the peculiarities of manners, habits, and institutions, divided parties in the ancient republics, animated the Whigs and Tories of Great Britain, distinguished in our times the liberals and ultras of France, and may be traced, even in the bloody struggles of unhappy Spain. Sir, when the gallant Riego, who devoted himself and all that he possessed to the liberties of his country, was dragged to the scaffold, followed by the tears and lamentations of every lover of freedom throughout the world, he perished amid the deafening cries of "long live the absolute king!" The people whom I represent, Mr. President, are the descendants of those who brought with them to this country, as the most precious of their possessions, "an ardent love of liberty;" and while that shall be preserved, they will always be found manfully struggling against the consolidation of the government—as the worst of evils.

The senator from Massachusetts, in denouncing what he is pleased to call the Carolina doctrine, has attempted to throw ridicule upon the idea that a State has any constitutional remedy, by the exercise of its sovereign authority against a "gross, palpable, and deliberate violation of the Constitution." He calls it "an idle" or "ridiculous notion," or something to that effect, and added that it would make the Union "a

mere rope of sand." Now, sir, as the gentleman has not condescended to enter into any examination of the question, and has been satisfied with throwing the weight of his authority into the scale, I do not deem it necessary to do more than to throw into the opposite scale the authority on which South Carolina relies; and there, for the present, I am perfectly willing to leave the controversy. The South Carolina doctrine, that is to say, the doctrine contained in an exposition reported by a committee of the legislature in December, 1828, and published by their authority, is the good old Republican doctrine of '98—the doctrine of the celebrated "Virginia Resolutions" of that year, and of "Madison's Report" of '99. It will be recollected that the legislature of Virginia, in December, '98, took into consideration the Alien and Sedition Laws, then considered by all Republicans as a gross violation of the Constitution of the United States, and on that day passed, among others, the following resolutions:

"The General Assembly doth explicitly and peremptorily declare that it views the powers of the Federal Government, as resulting from the compact to which the States are parties, as limited by the plain sense and intention of the instrument constituting that compact, as no further valid than they are authorized by the grants enumerated in that compact; and that in case of a deliberate, palpable, and dangerous exercise of other powers not granted by the said compact, the States who are parties thereto, have the right, and are in duty bound, to interpose for arresting the progress of the evil, and for maintaining, within their respective limits, the authorities, rights, and liberties, appertaining to them."

In addition to the above resolution, the General Assembly of Virginia "appealed to the other States, in the confidence that they would concur with that Commonwealth, that the acts aforesaid (the alien and sedition laws) are unconstitutional, and that the necessary and proper measures would be taken by each, for co-operating with Virginia in maintaining, unimpaired, the authorities, rights, and liberties, reserved to the States respectively, or to the people."

The legislatures of several of the New England States having, contrary to the expectation of the legislature of Virginia, expressed their dissent from these doctrines; the subject came up again for consideration during the session of 1799-1800, when it was referred to a select committee, by whom was made that celebrated report which is familiarly known as "Madison's Report," and which deserves to last as long as the Constitution itself. In that report, which was subsequently adopted by the legislature, the whole subject was deliberately re-examined, and the objections urged against the Virginia doctrines carefully

considered. The result was that the legislature of Virginia re-affirmed all the principles laid down in the resolutions of 1798, and issued to the world that admirable report which has stamped the character of Mr. Madison as the preserver of that Constitution which he had contributed so largely to create and establish. I will here quote from Mr. Madison's report one or two passages which bear more immediately on the point in controversy:

"The resolution having taken this view of the federal compact, proceeds to infer 'that in case of a deliberate, palpable and dangerous exercise of other powers, not granted by the said compact, the States who are parties thereto, have the right, and are in duty bound, to interpose for arresting the progress of the evil, and for maintaining, within their respective limits, the authorities, rights, and liberties, appertaining to them.'

"It appears to your committee to be a plain principle, founded in common sense, illustrated by common practice, and essential to the nature of compacts, that, where resort can be had to no tribunal, superior to the authority of the parties, the parties themselves must be the rightful judges in the last resort, whether the bargain made has been pursued or violated. The Constitution of the United States was formed by the sanction of the States, given by each in its sovereign capacity. It adds to the stability and dignity, as well as to the authority of the Constitution, that it rests upon this legitimate and solid foundation. The States, then, being the parties to the constitutional compact, and in their sovereign capacity, it follows of necessity that there can be no tribunal above their authority to decide, in the last resort, whether the compact made by them be violated; and consequently that, as the parties to it, they must themselves decide, in the last resort, such questions as may be of sufficient magnitude to require their interposition.

"The resolution has guarded against any misapprehension of its object, by expressly requiring for such an interposition, 'the case of a deliberate, palpable, and dangerous breach of the Constitution, by the exercise of powers not granted by it.' It must be a case, not of a light and transient nature, but of a nature dangerous to the great purposes for which the Constitution was established.

"But the resolution has done more than guard against misconstruction, by expressly referring to cases of a deliberate, palpable and dangerous nature. It specifies the object of the interposition which it contemplates, to be solely that of arresting the progress of the evil of usurpation, and of maintaining the authorities, rights, and liberties, appertaining to the States, as parties to the Constitution.

"From this view of the resolution it would seem inconceivable that it can incur any just disapprobation from those who, laying aside all momentary impressions, and recollecting the genuine source and object of the federal Constitution, shall candidly and accurately interpret the meaning of the General Assembly. If the deliberate exercise of dangerous powers, palpably withheld by the Constitution, could not justify the parties to it in interposing, even so far as to arrest the progress of

the evil, and thereby to preserve the Constitution itself, as well as to provide for the safety of the parties to it, there would be an end to all relief from usurped power, and a direct subversion of the rights specified or recognized under all the State constitutions, as well as a plain denial of the fundamental principles on which our independence itself was declared."

But, sir, our authorities do not stop here. The State of Kentucky responded to Virginia, and on the 10th of November, 1798, adopted those celebrated resolutions, well known to have been penned by the author of the Declaration of American Independence. In those resolutions, the legislature of Kentucky declare "That the government created by this compact was not made the exclusive or final judge of the extent of the powers delegated to itself, since that would have made its discretion, and not the Constitution, the measure of its powers; but that, as in all other cases of compact among parties having no common judge, each party has an equal right to judge, for itself, as well of infractions as of the mode and measure of redress."

At the ensuing session of the legislature the subject was re-examined, and on the 14th November, 1799, the resolutions of the preceding year were deliberately reaffirmed, and it was among other things solemnly declared:

"That if those who administer the general government be permitted to transgress the limits fixed by that compact, by a total disregard to the special delegations of power therein contained, an annihilation of the State governments, and the erection upon their ruins of a general consolidated government will be the inevitable consequence. That the principles of construction contended for by sundry of the State legislatures, that the General Government is the exclusive judge of the extent of the powers delegated to it, stop nothing short of despotism; since the discretion of those who administer the government, and not the Constitution, would be the measure of their powers. That the several States who formed that instrument, being sovereign and independent, have the unquestionable right to judge of its infraction, and that a nullification, by those sovereignties, of all unauthorized acts done under color of that instrument, is the rightful remedy."

Time and experience confirmed Mr. Jefferson's opinion on this all-important point. In the year 1821 he expressed himself in this emphatic manner: "It is a fatal heresy to suppose that either our State governments are superior to the federal, or the federal to the State; neither is authorized literally to decide which belongs to itself or its co-partner in government; in differences of opinion between their different sets of public servants, the appeal is to neither, but to their employers peaceably assembled by their representatives in convention."

The opinion of Mr. Jefferson on this subject has been so repeatedly and so solemnly expressed, that they may be said to have been among the most fixed and settled convictions of his mind.

In the protest prepared by him for the legislature of Virginia, in December, 1825, in respect to the powers exercised by the federal government in relation to the tariff and internal improvements, which he declares to be "usurpations of the powers retained by the States, mere interpolations into the compact, and direct infractions of it," he solemnly re-asserts all the principles of the Virginia resolutions of '98—protests against "these acts of the federal branch of the government, as null and void, and declares that, although Virginia would consider a dissolution of the Union as among the greatest calamities that could befall them, yet it is not the greatest. There is one yet greater—submission to a government of unlimited powers. It is only when the hope of this shall become absolutely desperate, that further forbearance could not be indulged."

In his letter to Mr. Giles, written about the same time, he says:

"I see, as you do, and with the deepest affliction, the rapid strides with which the federal branch of our government is advancing towards the usurpation of all the rights reserved to the States, and the consolidation in itself of all powers, foreign and domestic, and that too by constructions which leave no limits to their powers, etc. Under the power to regulate commerce, they assume, indefinitely, that also over agriculture and manufactures, etc. Under the authority to establish post roads, they claim that of cutting down mountains for the construction of roads, and digging canals, etc. And what is our resource for the preservation of the Constitution? Reason and argument? You might as well reason and argue with the marble columns encircling them, etc. Are we then to stand to our arms, with the hot-headed Georgian? No [and I say no, and South Carolina has said no]: that must be the last resource. We must have patience and long endurance with our brethren, etc., and separate from our companions only when the sole alternatives left are a dissolution of our union with them, or submission to a government without limitation of powers. Between these two evils, when we must make a choice, there can be no hesitation."

Such, sir, are the high and imposing authorities in support of "the Carolina doctrine," which is, in fact, the doctrine of the Virginia Resolutions of 1798.

Sir, at that day the whole country was divided on this very question. It formed the line of demarcation between the federal and republican parties; and the great political revolution which then took place turned upon the very question involved in these resolutions. That question was decided by the people, and by that decision the Constitution

was, in the emphatic language of Mr. Jefferson, "saved at its last gasp." I should suppose, sir, it would require more self-respect than any gentlemen here would be willing to assume, to treat lightly doctrines derived from such high resources. Resting on authority like this, I will ask gentlemen whether South Carolina has not manifested a high regard for the Union, when, under a tyranny ten times more grievous than the alien and sedition laws, she has hitherto gone no further than to petition, remonstrate, and to solemnly protest against a series of measures which she believes to be wholly unconstitutional, and utterly destructive of her interests. Sir, South Carolina has not gone one step further than Mr. Jefferson himself was disposed to go, in relation to the present subject of our present complaints—not a step further than the statesmen from New England were disposed to go under similar circumstances; no further than the senator from Massachusetts himself once considered as within "the limits of a constitutional opposition." The doctrine that it is the right of a State to judge of the violations of the Constitution on the part of the Federal Government, and to protect her citizens from the operations of unconstitutional laws, was held by the enlightened citizens of Boston, who assembled in Faneuil Hall, on the 25th of January, 1809. They state in that celebrated memorial that "they looked only to the State legislature, who were competent to devise relief against the unconstitutional acts of the General Government. That your power (say they) is adequate to that object, is evident from the organization of the confederacy."

A distinguished senator from one of the New England States (Mr. Hillhouse), in a speech delivered here, on a bill for enforcing the embargo, declared: "I feel myself bound in conscience to declare (lest the blood of those who shall fall in the execution of this measure shall be on my head), that I consider this to be an act which directs a mortal blow at the liberties of my country—an act containing unconstitutional provisions, to which the people are not bound to submit, and to which, in my opinion, they will not submit."

And the senator from Massachusetts himself, in a speech delivered on the same subject in the other House, said, "This opposition is constitutional and legal; it is also conscientious. It rests on settled and sober conviction, that such policy is destructive to the interests of the people, and dangerous to the being of government. The experience of every day confirms these sentiments. Men who act from such motives are not to be discouraged by trifling obstacles, nor awed by any dangers.

They know the limit of constitutional opposition; up to that limit, at their own discretion, they will walk, and walk fearlessly." How "the being of the government" was to be endangered by "constitutional opposition" to the embargo, I leave to the gentleman to explain.

Thus it will be seen, Mr. President, that the South Carolina doctrine is the republican doctrine of '98; that it was promulgated by the fathers of the faith—that it was maintained by Virginia and Kentucky in the worst of times—that it constituted the very pivot on which the political revolution of that day turned—that it embraces the very principles, the triumph of which at that time saved the Constitution at its last gasp, and which New England statesmen were not unwilling to adopt, when they believed themselves to be the victims of unconstitutional legislation. Sir, as to the doctrine that the Federal Government is the exclusive judge of the extent as well as the limitations of its powers, it seems to me to be utterly subversive of the sovereignty and independence of the States. It makes but little difference, in my estimation, whether Congress or the Supreme Court are invested with this power. If the Federal Government in all, or any of its departments, is to prescribe the limits of its own authority, and the States are bound to submit to the decision, and are not to be allowed to examine and decide for themselves, when the barriers of the Constitution shall be overleaped, this is practically "a government without limitation of powers." The States are at once reduced to mere petty corporations, and the people are entirely at your mercy. I have but one word more to add. In all the efforts that have been made by South Carolina, to resist the unconstitutional laws which Congress has extended over them, she has kept steadily in view the preservation of the Union, by the only means by which she believes it can be long preserved—a firm, manly and steady resistance against usurpation. The measures of the Federal Government have, it is true, prostrated her interests, and will soon involve the whole South in irretrievable ruin. But even this evil, great as it is, is not the chief ground of our complaints. It is the principle involved in the contest—a principle which, substituting the discretion of Congress for the limitations of the Constitution, brings the States and the people to the feet of the Federal Government, and leaves them nothing they can call their own. Sir, if the measures of the Federal Government were less oppressive, we should still strive against this usurpation. The South is acting on a principle she has always held sacred—resistance to unauthorized taxation. These, sir, are the principles, which induced

the immortal Hampden to resist the payment of a tax of twenty shillings. Would twenty shillings have ruined his fortune? No! but the payment of half twenty shillings, on the principle on which it was demanded, would have made him a slave. Sir, if in acting on these high motives—if animated by that ardent love of liberty which has always been the most prominent trait in the southern character—we should be hurried beyond the bounds of a cold and calculating prudence, who is there, with one noble and generous sentiment in his bosom, that would not be disposed, in the language of Burke, to exclaim, "You must pardon something to the spirit of liberty!"

DANIEL WEBSTER

DANIEL WEBSTER was born in Salisbury, January 18, 1782. In 1796 he attended Phillips Exeter Academy. He afterwards said that at this time he was so bashful that he could not muster courage to take his regular turn in the declamatory exercises before the school. In 1797 he entered Dartmouth College with a poor preparation, but his natural ability soon placed him high up in his class. In vacation he taught school to help himself and elder brother along and even taught for eight months after his graduation.

He was admitted to the bar at Boston in March, 1805, and at Portsmouth, New Hampshire, soon became prominent as a lawyer and as a Federalist. He was elected to the House in 1813. His speeches in the Dartmouth College case in 1818 and at the unveiling of the Boston monument in 1825 made him one of the most famous orators of the country.

He was transferred from the House to the Senate in 1828 and in 1830 made his great reply to Hayne. This developed the only principle which could render the Nation permanent, that the Supreme Court is the final arbiter between the constitution and Congress and between a State and the Nation, and ennobled the Union in some of the grandest passages in English literature.

In 1834 he became one of the leaders of the new Whig party. From 1841 to 1843 he was Secretary of State under Harrison and in

1844 again accepted the Senatorship. In 1850 he supported Clay's compromise although to do so he had to advocate a fugitive slave law. He died at Marshfield, Oct. 24, 1852.

Webster probably did more than any other statesman to strengthen the foundations of the Union. His advocacy of the fugitive slave law was much condemned in the North as weak and inconsistent, but the very fact that he loved the Union so much made him willing to make concessions of policy in order to preserve it. Though often a candidate for the Presidency he was never nominated, probably because it was felt that as a hard drinker and careless debtor he would not be personally a man whom it would be policy to nominate.

THE SUPREME COURT THE FINAL ARBITER

There yet remains to be performed, Mr. President, by far the most grave and important duty, which I feel to be devolved on me, by this occasion. It is to state, and to defend, what I conceive to be the true principles of the Constitution under which we are here assembled. I might well have desired that so weighty a task should have fallen into other and abler hands. I could have wished that it should have been executed by those, whose character and experience give weight and influence to their opinions, such as cannot possibly belong to mine. But, sir, I have met the occasion, not sought it: and I shall proceed to state my own sentiments, without challenging for them any particular regard, with studied plainness, and as much precision as possible.

I understand the honorable gentleman from South Carolina to maintain, that it is a right of the State legislatures to interfere, whenever, in their judgment, this government transcends its constitutional limits, and to arrest the operation of its laws.

I understand him to maintain this right; as a right existing under the Constitution, not as a right to overthrow it, on the ground of extreme necessity, such as would justify violent revolution.

I understand him to maintain an authority on the part of the States thus to interfere, for the purpose of correcting the exercise of power by the general government, of checking it, and of compelling it to conform to their opinion of the extent of its powers.

I understand him to maintain that the ultimate power of judging of the constitutional extent of its own authority, is not lodged exclusively

in the general government, or any branch of it; but that, on the contrary, the States may lawfully decide for themselves, and each State for itself, whether, in a given case, the act of the general government transcends its power.

I understand him to insist that, if the exigency of the case, in the opinion of any State government, require it, such government may, by its own sovereign authority, annul an act of the general government, which it deems plainly and palpably unconstitutional.

This is the sum of what I understand from him, to be the South Carolina doctrine; and the doctrine which he maintains. I propose to consider it, and compare it with the Constitution. Allow me to say, as a preliminary remark, that I call this the South Carolina doctrine, only because the gentleman himself has so denominated it. I do not feel at liberty to say that South Carolina, as a State, has ever advanced these sentiments. I hope she has not, and never may. That a great majority of her people are opposed to the tariff laws, is doubtless true. That a majority, somewhat less than that just mentioned, conscientiously believe these laws unconstitutional, may probably also be true. But that any majority holds to the right of direct State interference, at State discretion, the right of nullifying acts of Congress, by acts of State legislation, is more than I know, and what I shall be slow to believe.

That there are individuals, besides the honorable gentleman, who do maintain these opinions, is quite certain. I recollect the recent expression of a sentiment, which circumstances attending its utterance and publication justify us in supposing was not unpremeditated. "The sovereignty of the State—never to be controlled, construed, or decided on, but by her own feelings of honorable justice."

Mr. Hayne here rose, and said that, for the purpose of being clearly understood, he would state that his proposition was in the words of the Virginia resolution, as follows:

"That this assembly doth explicitly and peremptorily declare, that it views the powers of the federal government, as resulting from the compact, to which the States are parties, as limited by the plain sense and intention of the instrument constituting that compact, as no farther valid than they are authorized by the grants enumerated in that compact; and that, in case of a deliberate, palpable and dangerous exercise of other powers, not granted by the said compact, the States who are parties thereto, have the right, and are in duty bound to interpose, for arresting the progress of the evil, and for maintaining, within their respective limits, the authorities, rights, and liberties appertaining to them."

Mr. Webster resumed:

I am quite aware, Mr. President, of the existence of the resolution which the gentleman read, and has now repeated, and that he relies on it as his authority. I know the source, too, from which it is understood to have proceeded. I need not say that I have much respect for the constitutional opinions of Mr. Madison; they would weigh greatly with me, always. But before the authority of his opinion be vouched for the gentleman's proposition, it will be proper to consider what is the fair interpretation of that resolution to which Mr. Madison is understood to have given his sanction. As the gentleman construes it, it is an authority for him. Possibly he may not have adopted the right construction. That resolution declares that, in the case of the dangerous exercise of powers not granted by the general government, the States may interpose to arrest the progress of the evil. But how interpose, and what does this declaration purport? Does it mean no more than that there may be extreme cases, in which the people, in any mode of assembling, may resist usurpation, and relieve themselves from a tyrannical government? No one will deny this. Such resistance is not only acknowledged to be just in America, but in England also. Blackstone admits as much, in the theory, and practice, too, of the English constitution. We, sir, who oppose the Carolina doctrine, do not deny that the people may, if they choose, throw off any government, when it becomes oppressive and intolerable, and erect a better in its stead. We all know that civil institutions are established for the public benefit, and that when they cease to answer the ends of their existence, they may be changed. But I do not understand the doctrine now contended for to be that, which, for the sake of distinctness, we may call the right of revolution. I understand the gentleman to maintain that, without revolution, without civil commotion, without rebellion, a remedy for supposed abuse and transgression of the powers of the general government lies in a direct appeal to the interference of the State governments.

Mr. Hayne here rose: he did not contend, he said, for the mere right of revolution, but for the right of constitutional resistance. What he maintained was, that in case of a plain, palpable violation of the Constitution, by the general government, a State may interpose; and that this interposition is constitutional. Mr. Webster resumed:

So, sir, I understand the gentleman, and am happy to find that I did not misunderstand him. What he contends for is, that it is constitutional to interrupt the administration of the Constitution itself, in

the hands of those who are chosen and sworn to administer it, by the direct interference, in form of law of the States, in virtue of their sovereign capacity. The inherent right in the people to reform their government I do not deny: and they have another right, and that is, to resist unconstitutional laws without overturning the government. It is no doctrine of mine, that unconstitutional laws bind the people. The great question is, whose prerogative is it to decide on the constitutionality or unconstitutionality of the laws? On that, the main debate hinges. The proposition that, in case of a supposed violation of the Constitution by Congress, the States have a constitutional right to interfere, and annul the law of Congress, is the proposition of the gentleman: I do not admit it. If the gentleman had intended no more than to assert the right of revolution, for justifiable cause, he would have said only what all agree to. But I cannot conceive that there can be a middle course, between submission to the laws, when regularly pronounced constitutional, on the one hand, and open resistance, which is revolution, or rebellion, on the other. I say the right of a State to annul a law of Congress cannot be maintained but on the ground of the unalienable right of man to resist oppression; that is to say, upon the ground of revolution. I admit that there is an ultimate violent remedy, above the Constitution, and in defiance of the Constitution, which may be resorted to, when a revolution is to be justified. But I do not admit that, under the Constitution, and in conformity with it, there is any mode in which a State government, as a member of the Union, can interfere and stop the progress of the general government, by force of her own laws, under any circumstances whatever.

This leads us to inquire into the origin of this government, and the source of its power. Whose agent is it? Is it the creature of the State legislatures, or the creature of the people? If the government of the United States be the agent of the State governments, then they may control it; provided they can agree in the manner of controlling it; if it be the agent of the people, then the people alone can control it, restrain it, or modify, or reform it. It is observable enough, that the doctrine for which the honorable gentleman contends, leads him to the necessity of maintaining, not only that this general government is the creature of the States, but that it is the creature of each of the States severally; so that each may assert the power, for itself, of determining whether it acts within the limits of its authority. It is the servant of four and twenty masters, of different wills and different pur-

poses, and yet bound to obey all. This absurdity (for it seems no less) arises from a misconception as to the origin of this government and its true character. It is, sir, the people's Constitution, the people's government; made for the people; made by the people; and answerable to the people. The people of the United States have declared that this Constitution shall be the supreme law. We must either admit the proposition, or dispute their authority. The States are unquestionably sovereign, so far as their sovereignty is not affected by this supreme law. But the State legislatures, as political bodies, however sovereign, are yet not sovereign over the people. So far as the people have given power to the general government, so far the grant is unquestionably good, and the government holds of the people and not of the State governments. We are all agents of the same supreme power, the people. The general government and the State governments derive their authority from the same source. Neither can, in relation to the other, be called primary, though one is definite and restricted, and the other general and residuary. The national government possesses those powers which it can be shown the people have conferred on it, and no more. All the rest belongs to the State governments, or to the people themselves. So far as the people have restrained State sovereignty, by the expression of their will in the Constitution of the United States, so far, it must be admitted, State sovereignty is effectually controlled. I do not contend that it is, or ought to be controlled farther. The sentiment to which I have referred, propounds that State sovereignty is only to be controlled by its own "feeling of justice;" that is to say, it is not to be controlled at all; for one who is to follow his own feelings is under no legal control. Now, however men may think this ought to be, the fact is, that the people of the United States have chosen to impose control on State sovereignties. There are those, doubtless, who wish they had been left without restraint; but the Constitution has ordered the matter differently. To make war, for instance, is an exercise of sovereignty; but the Constitution declares that no State shall make war. To coin money is another exercise of sovereign power; but no State is at liberty to coin money. Again, the Constitution says that no sovereign State shall be so sovereign as to make a treaty. These prohibitions, it must be confessed, are a control on the State sovereignty of South Carolina, as well as of the other States, which does not arise "from her own feelings of honorable justice." Such an opinion, therefore, is in defiance of the plainest provisions of the Constitution.

There are other proceedings of public bodies which have already been alluded to, and to which I refer again for the purpose of ascertaining more fully what is the length and breadth of that doctrine, denominated the Carolina doctrine, which the honorable member has now stood up on this floor to maintain. In one of them I find it resolved that "the tariff of 1828, and every other tariff designed to promote one branch of industry at the expense of others, is contrary to the meaning and intention of the federal compact; and is such a dangerous, palpable and deliberate usurpation of power, by a determined majority, wielding the general government beyond the limits of its delegated powers, as calls upon States which compose the suffering minority, in their sovereign capacity, to exercise the powers which, as sovereigns, necessarily devolve upon them when their compact is violated."

Observe, sir, that this resolution holds the tariff of 1828, and every other tariff designed to promote one branch of industry at the expense of another, to be such a dangerous, palpable and deliberate usurpation of power as calls upon the States, in their sovereign capacity, to interfere by their own authority. This denunciation, Mr. President, you will please to observe, includes our old tariff of 1816, as well as all others; because that was established to promote the interest of the manufactures of cotton, to the manifest and admitted injury of the Calcutta cotton trade. Observe, again, that all the qualifications are here rehearsed and charged upon the tariff, which are necessary to bring the case within the gentleman's proposition. The tariff is a usurpation; it is a dangerous usurpation; it is a palpable usurpation; it is a deliberate usurpation. It is such a usurpation, therefore, as calls upon the States to exercise their right of interference. Here is a case, then, within the gentleman's principles, and all his qualifications of his principles. It is a case for action. The Constitution is plainly, dangerously, palpably and deliberately violated; and the States must interpose their own authority to arrest the law. Let us suppose the State of South Carolina to express this same opinion by the voice of her legislature. That would be very imposing; but what then? Is the voice of one State conclusive? It so happens that at the very moment when South Carolina resolves that the tariff laws are unconstitutional, Pennsylvania and Kentucky resolve exactly the reverse. They hold those laws to be both highly proper and strictly constitutional. And now, sir, how does the honorable member propose to deal with this case? How does he relieve us from this difficulty upon any principle of his? His construction gets us into it; how does he propose to get us out?

In Carolina the tariff is a palpable, deliberate usurpation; Carolina, therefore, may nullify it, and refuse to pay the duties. In Pennsylvania it is both clearly constitutional and highly expedient; and there the duties are to be paid. And yet we live under a government of uniform laws, and under a Constitution too, which contains an express provision, as it happens, that all duties shall be equal in all the States. Does not this approach absurdity?

If there be no power to settle such questions, independent of either of the States, is not the whole Union a rope of sand? Are we not thrown back again precisely upon the old confederation?

It is too plain to be argued. Four and twenty interpreters of constitutional law, each with a power to decide for itself, and none with authority to bind anybody else, and this constitutional law the only bond of their union! What is such a state of things but a mere connection during pleasure, or, to use the phraseology of the times, during feeling? And that feeling, too, not the feeling of the people, who established the Constitution, but the feeling of the State governments.

In another of the South Carolina addresses, having premised that the crisis requires "all the concentrated energy of passion," an attitude of open resistance to the laws of the Union is advised. Open resistance to the laws, then, is the constitutional remedy, the conservative power of the State, which the South Carolina doctrines teach for the redress of political evils, real or imaginary. And its authors further say that, appealing with confidence to the Constitution itself to justify their opinions, they cannot consent to try their accuracy by the courts of justice. In one sense, indeed, sir, this is assuming an attitude of open resistance in favor of liberty. But what sort of liberty? The liberty of establishing their own opinions, in defiance of the opinions of all others; the liberty of judging and of deciding exclusively themselves, in a matter in which others have as much right to judge and decide as they; the liberty of placing their own opinions above the judgment of all others, above the laws, and above the Constitution. This is their liberty, and this is the fair result of the proposition contended for by the honorable gentleman. Or it may be more properly said, it is identical with it, rather than a result from it.

In the same publication we find the following: "Previously to our revolution, when the arm of oppression was stretched over New England, where did our northern brethren meet with a braver sympathy than that which sprung from the bosoms of Carolinians? We had no

extortion, no oppression, no collision with the king's ministers, no navigation interests springing up in envious rivalry of England."

This seems extraordinary language. South Carolina no collision with the king's ministers in 1775! No extortion! No oppression! But, sir, it is also most significant language. Does any man doubt the purpose for which it was penned? Can anyone fail to see that it was designed to raise in the reader's mind the question whether, at this time—that is to say, in 1828—South Carolina has any collision with the king's ministers, any oppression, or extortion to fear from England? Whether, in short, England is not as naturally the friend of South Carolina, as New England, with her navigation interests springing up in envious rivalry of England?

Is it not strange, sir, that an intelligent man in South Carolina, in 1828, should thus labor to prove that, in 1775, there was no hostility, no cause of war, between South Carolina and England? That she had no occasion, in reference to her own interest, or from a regard to her own welfare, to take up arms in the revolutionary contest? Can anyone account for the expression of such strange sentiments, and their circulation through the State, otherwise than by supposing the object to be, what I have already intimated, to raise the question, if they had no "collision" (mark the expression) with the ministers of King George the Third in 1775, what collision have they, in 1828, with the ministers of King George the Fourth? What is there now, in the existing state of things, to separate Carolina from Old, more, or rather, than from New England?

Resolutions, sir, have been recently passed by the legislature of South Carolina. I need not refer to them; they go no farther than the honorable gentleman himself has gone—and, I hope, not so far. I content myself, therefore, with debating the matter with him.

And now, sir, what I have first to say on this subject is that, at no time, and under no circumstances, has New England, or any State in New England, or any respectable body of persons in New England, or any public man of standing in New England, put forth such a doctrine as this Carolina doctrine.

The gentleman has found no case, he can find none, to support his own opinions by New England authority. New England has studied the Constitution in other schools, and under other teachers. She looks upon it with other regards, and deems more highly and reverently both of its just authority, and its utility and excellence. The history of her

legislative proceedings may be traced—the ephemeral effusions of temporary bodies, called together by the excitement of the occasion, may be hunted up—they have been hunted up. The opinions and votes of her public men, in and out of Congress, may be explored—it will all be in vain. The Carolina doctrine can derive from her neither countenance nor support. She rejects it now; she always did reject it; and till she loses her senses, she always will reject it. The honorable member has referred to expressions, on the subject of the embargo law, made in this place by an honorable and venerable gentleman, Mr. Hillhouse, now favoring us with his presence. He quotes that distinguished senator as saying that, in his judgment, the embargo law was unconstitutional, and that, therefore, in his opinion, the people were not bound to obey it. That, sir, is perfectly constitutional language. An unconstitutional law is not binding; but then it does not rest with a resolution or a law of a State legislature to decide whether an act of Congress be, or be not constitutional. An unconstitutional act of Congress would not bind the people of this district, although they have no legislature to interfere in their behalf; and, on the other hand, a constitutional law of Congress does bind the citizens of every State, although all their legislatures should undertake to annul it by act or resolution. The venerable Connecticut senator is a constitutional lawyer, of sound principles and enlarged knowledge; a statesman practiced and experienced, bred in the company of Washington, and holding just views upon the nature of our governments. He believed the embargo unconstitutional, and so did others; but what then? Who, did he suppose, was to decide that question? The State legislatures? Certainly not. No such sentiment ever escaped his lips. Let us follow up, sir, this New England opposition to the embargo laws; let us trace it till we discern the principle which controlled and governed New England throughout the whole course of that opposition. We shall then see what similarity there is between the New England school of constitutional opinions and this modern Carolina school. The gentleman, I think, read a petition from some single individual, addressed to the legislature of Massachusetts, asserting the Carolina doctrine—that is, the right of State interference to arrest the laws of the Union. The fate of that petition shows the sentiment of the legislature. It met no favor. The opinions of Massachusetts were otherwise. They had been expressed, in 1798, in answer to the resolutions of Virginia, and she did not depart from them, nor bend them to the times. Misgoverned, wronged, oppressed as she felt herself to be, she still held

fast her integrity to the Union. The gentleman may find in her proceedings much evidence of dissatisfaction with the measures of government, and great and deep dislike to the embargo; all this makes the case so much the stronger for her; for, notwithstanding all this dissatisfaction and dislike, she claimed no right, still, to sever asunder the bonds of the Union. There was heat, and there was anger, in her political feeling—be it so—her heat or her anger did not, nevertheless, betray her into infidelity to the government. The gentleman labors to prove that she disliked the embargo, as much as South Carolina dislikes the tariff, and expressed her dislike as strongly. Be it so; but did she propose the Carolina remedy? Did she threaten to interfere, by State authority, to annul the laws of the Union? That is the question for the gentleman's consideration.

No doubt, sir, a great majority of the people of New England conscientiously believed the embargo law of 1807 unconstitutional; as conscientiously, certainly, as the people of South Carolina hold that opinion of the tariff. They reasoned thus: Congress has power to regulate commerce; but here is a law, they said, stopping all commerce, and stopping it indefinitely. The law is perpetual; that is, it is not limited in point of time, and must, of course, continue until it shall be repealed by some other law. It is as perpetual, therefore, as the law against treason or murder. Now, is this regulating commerce, or destroying it? Is it guiding, controlling, giving the rule to commerce, as a subsisting thing; or is it putting an end to it altogether? Nothing is more certain, than that a majority in New England deemed this law a violation of the Constitution. The very case required by the gentleman to justify State interference, had then arisen. Massachusetts believed this law to be a "deliberate, palpable, and dangerous exercise of a power, not granted by the Constitution." Deliberate it was, for it was long continued; palpable, she thought it, as no words in the Constitution gave the power, and only a construction, in her opinion most violent, raised it; dangerous it was, since it threatened utter ruin to her most important interests. Here, then, was a Carolina case. How did Massachusetts deal with it? It was, as she thought, a plain, manifest, palpable violation of the Constitution, and it brought ruin to her doors. Thousands of families, and hundreds of thousands of individuals were beggared by it. While she saw and felt all this, she saw and felt also that, as a measure of national policy, it was perfectly futile; that the country was no way benefited by that which caused so much individual distress; that it was efficient only

for the production of evil, and all that evil inflicted on ourselves. In such a case, under such circumstances, how did Massachusetts demean herself? Sir, she remonstrated, she memorialized, she addressed herself to the general government, not exactly "with the concentrated energy of passion," but with her own strong sense, and the energy of sober conviction. But she did not interpose the arm of her own power to arrest the law and break the embargo. Far from it. Her principles bound her to two things; and she followed her principles, lead where they might. First, to submit to every constitutional law of Congress, and, secondly, if the constitutional validity of the law be doubted, to refer that question to the decision of the proper tribunals. The first principle is vain and ineffectual without the second. A majority of us in New England believed the embargo law unconstitutional; but the great question was, and always will be in such cases, who is to decide this? Who is to judge between the people and the government? And, sir, it is quite plain that the Constitution of the United States confers on the government itself, to be exercised by its appropriate department, and under its own responsibility to the people, this power of deciding ultimately and conclusively, upon the just extent of its own authority. If this had not been done, we should not have advanced a single step beyond the old confederation.

Being fully of opinion that the embargo law was unconstitutional, the people of New England were yet equally clear in the opinion—it was a matter they did not doubt upon—that the question, after all, must be decided by the judicial tribunals of the United States. Before those tribunals, therefore, they brought the question. Under the provisions of the law, they had given bonds, to millions in amount, and which were alleged to be forfeited. They suffered the bonds to be sued, and thus raised the question. In the old-fashioned way of settling disputes, they went to law. The case came to hearing, and solemn argument; and he who espoused their cause, and stood up for them against the validity of the embargo act, was none other than that great man, of whom the gentleman has made honorable mention, Samuel Dexter. He was then, sir, in the fullness of his knowledge, and the maturity of his strength. He had retired from long and distinguished public service here, to the renewed pursuit of professional duties; carrying with him all that enlargement and expansion, all that new strength and force, which an acquaintance with the more general subjects discussed in the national councils, is capable of adding to professional attainment, in a mind of

true greatness and comprehension. He was a lawyer, and he was also a statesman. He had studied the Constitution when he filled public station, that he might defend it; he had examined its principles that he might maintain them. More than all men, or at least as much as any man, he was attached to the general government and to the union of the States. His feelings and opinions all ran in that direction. A question of constitutional law, too, was of all subjects that one which was best suited to his talents and learning. Aloof from technicality, and unfettered by artificial rule, such a question gave opportunity for that deep and clear analysis, that mighty grasp of principle, which so much distinguished his higher efforts. His very statement was argument; his inference seemed demonstration. The earnestness of his own conviction wrought conviction in others. One was convinced, and believed, and assented, because it was gratifying, delightful, to think and feel, and believe, in unison with an intellect of such evident superiority.

Mr. Dexter, sir, such as I have described him, argued the New England cause. He put into his effort his whole heart, as well as all the powers of his understanding; for he had avowed, in the most public manner, his entire concurrence with his neighbors, on the point in dispute. He argued the cause, it was lost, and New England submitted. The established tribunals pronounced the law constitutional, and New England acquiesced. Now, sir, is not this the exact opposite of the doctrine of the gentleman from South Carolina? According to him, instead of referring to the judicial tribunals, we should have broken up the embargo by laws of our own; we should have repealed it, *"quoad"* New England; for we had a strong, palpable and oppressive case. Sir, we believed the embargo unconstitutional; but still that was matter of opinion, and who was to decide it? We thought it a clear case; but, nevertheless, we did not take the law into our own hands, because we did not wish to bring about a revolution, nor to break up the Union: for I maintain that, between submission to the decision of the constituted tribunals, and revolution, or disunion, there is no middle ground—there is no ambiguous condition, half allegiance and half rebellion. And, sir, how futile, how very futile it is, to admit the right of State interference, and then attempt to save it from the character of unlawful resistance by adding terms of qualification to the causes, and occasions, leaving all these qualifications, like the case itself, in the discretion of the State governments. It must be a clear case, it is said, a deliberate case; a palpable case; a dangerous case. But then the State is still left at liberty to

decide for herself, what is clear, what is deliberate, what is palpable, what is dangerous. Do adjectives and epithets avail anything? Sir, the human mind is so constituted that the merits of both sides of a controversy appear very clear, and very palpable, to those who respectively espouse them; and both sides usually grow clearer as the controversy advances. South Carolina sees unconstitutionality in the tariff; she sees oppression there, also, and she sees danger. Pennsylvania, with a vision not less sharp, looks at the same tariff, and sees no such thing in it—she sees it all constitutional, all useful, all safe. The faith of South Carolina is strengthened by opposition, and she now not only sees, but resolves that the tariff is palpably unconstitutional, oppressive and dangerous: but Pennsylvania, not to be behind her neighbors, and equally willing to strengthen her own faith by a confident asseveration, resolves, also, and gives to every warm affirmative of South Carolina a plain, downright, Pennsylvania negative. South Carolina, to show the strength and unity of her opinion, brings her assembly to a unanimity, within seven voices; Pennsylvania, not to be outdone in this respect more than others, reduces her dissentient fraction to a single vote. Now, sir, again, I ask the gentleman what is to be done? Are these States both right? Is he bound to consider them both right? If not, which is in the wrong? or rather, which has the best right to decide? And if he, and if I are not to know what the Constitution means, and what it is, till those two State legislatures, and the twenty-two others, shall agree in its construction, what have we sworn to when we have sworn to maintain it? I was forcibly struck, sir, with one reflection, as the gentleman went on in his speech. He quoted Mr. Madison's resolutions to prove that a State may interfere, in a case of deliberate, palpable and dangerous exercise of a power not granted. The honorable member supposes the tariff law to be such an exercise of power; and that consequently a case has arisen in which the State may, if it see fit, interfere by its own law. Now it so happens, nevertheless, that Mr. Madison deems this same tariff law quite constitutional. Instead of a clear and palpable violation, it is, in his judgment, no violation at all. So that, while they use his authority for a hypothetical case, they reject it in the very case before them. All this, sir, shows the inherent—futility—I had almost used a stronger word—of conceding this power of interference to the States, and then attempting to secure it from abuse by imposing qualifications, of which the States themselves are to judge. One of two things is true; either the

laws of the Union are beyond the discretion and beyond the control of the States; or else we have no Constitution or general government, and are thrust back again to the days of the confederacy.

Let me here say, sir, that if the gentleman's doctrine had been received and acted upon in New England, in the times of the embargo and non-intercourse, we should probably not now have been here. The government would very likely have gone to pieces, and crumbled into the dust. No stronger case can ever arise than existed under those laws; no States can ever entertain a clearer conviction than the New England States then entertained; and if they had been under the influence of that heresy of opinion, as I must call it, which the honorable gentleman espouses, this Union would, in all probability, have been scattered to the four winds. I ask the gentleman, therefore, to apply his principles to that case; I ask him to come forth and declare whether, in his opinion, the New England States would have been justified in interfering to break up the embargo system under the conscientious opinions which they held upon it? Had they a right to annul that law? Does he admit, or deny? If that which is thought palpably unconstitutional in South Carolina justifies that State in arresting the progress of the law, tell me whether that which was thought palpably unconstitutional also in Massachusetts, would have justified her in doing the same thing? Sir, I deny the whole doctrine. It has not a foot of ground in the Constitution to stand on. No public man of reputation ever advanced it in Massachusetts, in the warmest times, or could maintain himself upon it there at any time.

I wish now, sir, to make a remark upon the Virginia resolutions of 1798. I cannot undertake to say how these resolutions were understood by those who passed them. Their language is not a little indefinite. In the case of the exercise by Congress, of a dangerous power, not granted to them, the resolutions assert the right, on the part of the State, to interfere and arrest the progress of the evil. This is susceptible of more than one interpretation. It may mean no more than that the States may interfere by complaint and remonstrance, or by proposing to the people an alteration of the Federal Constitution. This would all be quite unobjectionable; or it may be that no more is meant than to assert the general right of revolution, as against all governments, in cases of intolerable oppression. This no one doubts; and this, in my opinion, is all that he who framed the resolutions could have meant by it: for I shall not readily believe that he was ever of opinion that a State, under the

Constitution, and in conformity with it, could, upon the ground of her own opinion of its constitutionality, however clear and palpable she might think the case, annul a law of Congress, so far as it should operate on herself, by her own legislative power.

I must now beg to ask, sir, whence is this supposed right of the States derived?—where do they find the power to interfere with the laws of the Union? Sir, the opinion which the honorable gentleman maintains is a notion, founded in a total misapprehension, in my judgment, of the origin of this government, and of the foundation on which it stands. I hold it to be a popular government, erected by the people; those who administer it, responsible to the people; and itself capable of being amended and modified, just as the people may choose it should be. It is as popular, just as truly emanating from the people, as the State governments. It is created for one purpose; the State governments for another. It has its own powers; they have theirs. There is no more authority with them to arrest the operation of a law of Congress, than with Congress to arrest the operation of their laws. We are here to administer a Constitution emanating immediately from the people, and trusted by them to our administration. It is not the creature of the State governments. It is of no moment to the argument, that certain acts of the State legislatures are necessary to fill our seats in this body. That is not one of their original State powers, a part of the sovereignty of the State. It is a duty which the people, by the Constitution itself, have imposed on the State legislatures; and which they might have left to be performed elsewhere, if they had seen fit. So they have left the choice of President with electors; but all this does not affect the proposition that this whole government, President, Senate, and House of Representatives, is a popular government. It leaves it still all its popular character. The governor of a State (in some of the States) is chosen, not directly by the people, but by those who are chosen by the people, for the purpose of performing, among other duties, that of electing a governor. Is the government of the State, on that account, not a popular government? This government, sir, is the independent offspring of the popular will. It is not the creature of State legislatures; nay, more, if the whole truth must be told, the people brought it into existence, established it, and have hitherto supported it, for the very purpose, amongst others, of imposing certain salutary restraints on State sovereignties. The States cannot now make war; they cannot contract alliances; they cannot make, each for itself, separate regulations of com-

merce; they cannot lay imposts; they cannot coin money. If this Constitution, sir, be the creature of State legislatures, it must be admitted that it has obtained a strange control over the volitions of its creators.

The people, then, sir, erected this government. They gave it a Constitution, and in that Constitution the have enumerated the powers which they bestow on it. They have made it a limited government. They have restrained it to the exercise of such powers as are granted; and all others, they declare, are reserved to the States, or the people. But, sir, they have not stopped here. If they had, they would have accomplished but half their work. No definition can be so clear as to avoid possibility of doubt; no limitation so precise as to exclude all uncertainty. Who, then, shall construe this grant of the people? Who shall interpret their will, where it may be supposed they have left it doubtful? With whom do they repose this ultimate right of deciding on the powers of the government? Sir, they have settled all this in the fullest manner. They have left it with the government itself, in its appropriate branches. Sir, the very chief end, the main design, for which the whole Constitution was framed and adopted, was to establish a government that should not be obliged to act through State agency, or depend on State opinion and State discretion. The people had had quite enough of that kind of government, under the confederacy. Under that system, the legal action—the application of the law to individuals—belonged exclusively to the States. Congress could only recommend—their acts were not of binding force, till the States had adopted and sanctioned them. Are we in that condition still? Are we yet at the mercy of State discretion and State construction? Sir, if we are, then vain will be our attempt to maintain the Constitution under which we sit.

But, sir, the people have wisely provided, in the Constitution itself, a proper, suitable mode and tribunal for settling questions of constitutional law. There are, in the Constitution, grants of powers to Congress; and restrictions on these powers. There are also prohibitions on the States. Some authority must, therefore, necessarily exist, having the ultimate jurisdiction to fix and ascertain the interpretation of these grants, restrictions, and prohibitions. The Constitution has itself pointed out, ordained, and established that authority. How has it accomplished this great and essential end? By declaring, sir, that "the Constitution and the laws of the United States, made in pursuance thereof, shall be the supreme law of the land, anything in the constitution or laws of any State to the contrary notwithstanding."

This, sir, was the first great step. By this the supremacy of the constitution and laws of the United States is declared. The people so will it. No State law is to be valid, which comes in conflict with the Constitution, or any law of the United States passed in pursuance of it. But who shall decide this question of interference? To whom lies the last appeal? This, sir, the constitution itself decides, also, by declaring, "that the judicial power shall extend to all cases arising under the constitution and laws of the United States." These two provisions, sir, cover the whole ground. They are, in truth, the keystone of the arch. With these, it is a constitution; without them, it is a confederacy. In pursuance of these clear and express provisions, Congress established, at its very first session, in the judicial act, a mode for carrying them into full effect, and for bringing all questions of constitutional power to the final decision of the supreme court. It then, sir, became a government. It then had the means of self-protection; and, but for this, it would, in all probability, have been now among things which are past. Having constituted the government, and declared its powers, the people have further said, that since somebody must decide on the extent of these powers, the government shall itself decide; subject, always, like other popular governments, to its responsibility to the people. And now, sir, I repeat, how is it that a State legislature acquires any power to interfere? Who, or what, gives them the right to say to the people, "We, who are your agents and servants for one purpose, will undertake to decide that your other agents and servants, appointed by you for another purpose, have transcended the authority you gave them!" The reply would be, I think, not impertinent—"Who made you a judge over another's servants? To their own masters they stand or fall."

Sir, I deny this power of State legislatures altogether. It cannot stand the test of examination. Gentlemen may say, that in an extreme case, a State government might protect the people from intolerable oppression. Sir, in such a case, the people might protect themselves, without the aid of the State governments. Such a case warrants revolution. It must make, when it comes, a law for itself. A nullifying act of a State legislature cannot alter the case, nor make resistance any more lawful. In maintaining these sentiments, sir, I am but asserting the rights of the people. I state what they have declared, and insist on their right to declare it. They have chosen to repose this power in the general government, and I think it my duty to support it, like other constitutional powers.

For myself, sir, I do not admit the jurisdiction of South Carolina, or any other State, to prescribe my constitutional duty; or to settle, between me and the people, the validity of laws of Congress, for which I have voted. I decline her umpirage. I have not sworn to support the constitution according to her construction of its clauses. I have not stipulated, by my oath of office, or otherwise, to come under any responsibility, except to the people, and those whom they have appointed to pass upon the question, whether laws, supported by my votes, conform to the constitution of the country. And, sir, if we look to the general nature of the case, could any thing have been more preposterous, than to make a government for the whole Union, and yet leave its powers subject, not to one interpretation, but to thirteen, or twenty-four, interpretations? Instead of one tribunal, established by all, responsible to all, with power to decide for all—shall constitutional questions be left to four-and-twenty popular bodies, each at liberty to decide for itself, and none bound to respect the decisions of others; and each at liberty, too, to give a new construction on every new election of its own members? Would any thing, with such a principle in it, or rather with such a destitution of all principle, be fit to be called a government? No, sir. It should not be denominated a constitution. It should be called, rather, a collection of topics, for everlasting controversy; heads of debate for a disputatious people. It would not be a government. It would not be adequate to any practical good, nor fit for any country to live under. To avoid all possibility of being misunderstood, allow me to repeat again, in the fullest manner, that I claim no powers for the government by forced or unfair construction. I admit that it is a government of strictly limited powers; of enumerated, specified, and particularized powers; and that whatsoever is not granted, is withheld. But notwithstanding all this, and however the grant of powers may be expressed, its limit and extent may yet, in some cases, admit of doubt; and the general government would be good for nothing, it would be incapable of long existing, if some mode had not been provided, in which those doubts, as they should arise, might be peaceably, but authoritatively solved.

And now, Mr. President, let me run the honorable gentleman's doctrine a little into its practical application. Let us look at his probable "modus operandi." If a thing can be done, an ingenious man can tell how it is to be done. Now, I wish to be informed, how this State interference is to be put in practice without violence, bloodshed, and

rebellion. We will take the existing case of the tariff law. South Carolina is said to have made up her opinion upon it. If we do not repeal it (as we probably shall not), she will then apply to the case the remedy of her doctrine. She will, we must suppose, pass a law of her legislature, declaring the several acts of Congress, usually called the tariff laws, null and void, so far as they respect South Carolina, or the citizens thereof. So far, all is a paper transaction, and easy enough. But the collector at Charleston is collecting the duties imposed by these tariff laws—he therefore must be stopped. The collector will seize the goods if the tariff duties are not paid. The State authorities will undertake their rescue; the marshal, with his posse, will come to the collector's aid, and here the contest begins. The militia of the State will be called out to sustain the nullifying act. They will march, sir, under a very gallant leader; for I believe the honorable member himself commands the militia of that part of the State. He will raise the nullifying act on his standard, and spread it out as his banner! It will have a preamble, bearing, That the tariff laws are palpable, deliberate, and dangerous violations of the constitution! He will proceed, with this banner flying, to the custom-house in Charleston:

"All the while,
Sonorous metal, blowing martial sounds."

Arrived at the custom-house, he will tell the collector that he must collect no more duties under any of the tariff laws. This, he will be somewhat puzzled to say, by the way, with a grave countenance, considering what hand South Carolina herself had in that of 1816. But, sir, the collector would probably not desist at his bidding. He would show him the law of Congress, the treasury instruction, and his own oath of office. He would say, he should perform his duty, come what might. Here would ensue a pause: for they say that a certain stillness precedes the tempest. The trumpeter would hold his breath awhile, and before all this military array should fall on the custom-house, collector, clerks, and all, it is very probable some of those composing it, would request of their gallant commander-in-chief, to be informed a little upon the point of law; for they have, doubtless, a just respect for his opinions as a lawyer, as well as for his bravery as a soldier. They know he has read Blackstone and the constitution, as well as Turrene and Vauban. They would ask him, therefore, something concerning their rights in this matter. They would inquire, whether it was not somewhat dangerous to resist a law of the United States. What would be the nature

of their offence, they would wish to learn, if they, by military force and array, resisted the execution in Carolina of a law of the United States, and it should turn out, after all, that the law was constitutional? He would answer, of course, treason. No lawyer could give any other answer. John Fries, he would tell them, had learned that some years ago. How, then, they would ask, do you propose to defend us? We are not afraid of bullets, but treason has a way of taking people off, that we do not much relish. How do you propose to defend us? "Look at my floating banner," he would reply; "see there the nullifying law!" Is it your opinion, gallant commander, they would then say, that if we should be indicted for treason, that same floating banner of yours would make a good plea in bar? "South Carolina is a sovereign State," he would reply. That is true—but would the judge admit our plea? "These tariff laws," he would repeat, "are unconstitutional, palpably, deliberately, dangerously." That all may be so; but if the tribunal should not happen to be of that opinion, shall we swing for it? We are ready to die for our country, but it is rather an awkward business, this dying without touching the ground! After all, that is a sort of hemp tax, worse than any part of the tariff.

Mr. President, the honorable gentleman would be in a dilemma, like that of another great general. He would have a knot before him which he could not untie. He must cut it with his sword. He must say to his followers, defend yourselves with your bayonets; and this is war—civil war.

Direct collision, therefore, between force and force, is the unavoidable result of that remedy for the revision of unconstitutional laws which the gentleman contends for. It must happen in the very first case to which it is applied. Is not this the plain result? To resist, by force, the execution of a law, generally, is treason. Can the courts of the United States take notice of the indulgence of a State to commit treason? The common saying, that a State cannot commit treason herself, is nothing to the purpose. Can she authorize others to do it? If John Fries had produced an act of Pennsylvania, annulling the law of Congress, would it have helped his case? Talk about it as we will, these doctrines go the length of revolution. They are incompatible with any peaceable administration of the government. They lead directly to disunion and civil commotion; and, therefore, it is, that at their commencement, when they are first found to be maintained by

respectable men, and in a tangible form, I enter my public protest against them all.

The honorable gentleman argues, that if this government be the sole judge of the extent of its own powers, whether that right of judging be in Congress, or the Supreme Court, it equally subverts State sovereignty. This the gentleman sees, or thinks he sees, although he cannot perceive how the right of judging, in this matter, if left to the exercise of State legislatures, has any tendency to subvert the government of the Union. The gentleman's opinion may be that the right ought not to have been lodged with the general government; he may like better such a constitution, as we should have under the right of State interference; but I ask him to meet me on the constitution itself; I ask him if the power is not found there—clearly and visibly found there?

But, sir, what is this danger, and what the grounds of it? Let it be remembered, that the Constitution of the United States is not unalterable. It is to continue in its present form no longer than the people who established it shall choose to continue it. If they shall become convinced that they have made an injudicious or inexpedient partition and distribution of power, between the State governments and the general government, they can alter that distribution at will.

If any thing be found in the national constitution, either by original provision, or subsequent interpretation, which ought not to be in it, the people know how to get rid of it. If any construction be established, unacceptable to them, so as to become, practically, a part of the constitution, they will amend it, at their own sovereign pleasure: but while the people choose to maintain it, as it is; while they are satisfied with it, and refuse to change it, who has given, or who can give, to the State legislatures a right to alter it, either by interference, construction, or otherwise? Gentlemen do not seem to recollect that the people have any power to do any thing for themselves; they imagine there is no safety for them, any longer than they are under the close guardianship of the State legislatures. Sir, the people have not trusted their safety, in regard to the general constitution, to these hands. They have required other security, and taken other bonds. They have chosen to trust themselves, first, to the plain words of the instrument, and to such construction as the government itself, in doubtful cases, should put on its own powers, under their oaths of office, and subject to their responsibility to them: just as the people of a State trust their own

State governments with a similar power. Secondly, they have reposed their trust in the efficacy of frequent elections, and in their own power to remove their own servants and agents, whenever they see cause. Thirdly, they have reposed trust in the judicial power, which, in order that it might be trustworthy, they have made as respectable, as disinterested, and as independent as was practicable. Fourthly, they have seen fit to rely, in case of necessity, or high expediency, on their known and admitted power, to alter or amend the constitution, peaceably and quietly, whenever experience shall point out defects or imperfections. And, finally, the people of the United States have, at no time, in no way, directly or indirectly, authorized any State legislature to construe or interpret their high instrument of government; much less to interfere, by their own power, to arrest its course and operation.

If, sir, the people, in these respects, had done otherwise than they have done, their constitution could neither have been preserved, nor would it has been worth preserving. And, if its plain provisions shall now be disregarded, and these new doctrines interpolated in it, it will become as feeble and helpless a being, as its enemies, whether early or more recent, could possibly desire. It will exist in every State, but as a poor dependent on State permission. It must borrow leave to be; and will be, no longer than State pleasure, or State discretion, sees fit to grant the indulgence, and to prolong its poor existence.

But, sir, although there are fears, there are hopes also. The people have preserved this, their own chosen constitution, for forty years, and have seen their happiness, prosperity, and renown, grow with its growth, and strengthen with its strength. They are now, generally, strongly attached to it. Overthrown by direct assault, it cannot be; evaded, undermined, nullified, it will not be, if we, and those who shall succeed us here, as agents and representatives of the people, shall conscientiously and vigilantly discharge the two great branches of our public trust—faithfully to preserve, and wisely to administer it.

Mr. President, I have thus stated the reasons of my dissent to the doctrines which have been advanced and maintained. I am conscious of having detained you and the Senate much too long. I was drawn into the debate, with no previous deliberation such as is suited to the discussion of so grave and important a subject. But it is a subject of which my heart is full, and I have not been willing to suppress the utterance of its spontaneous sentiments. I cannot, even now, persuade myself to relinquish it, without expressing, once more, my deep

conviction, that, since it respects nothing less than the union of the States, it is of most vital and essential importance to the public happiness. I profess, sir, in my career, hitherto, to have kept steadily in view the prosperity and honor of the whole country, and the preservation of our federal Union. It is to that Union we owe our safety at home, and our consideration and dignity abroad. It is to that Union that we are chiefly indebted for whatever makes us most proud of our country. That Union we reached only by the discipline of our virtues in the severe school of adversity. It had its origin in the necessities of disordered finance, prostrate commerce, and ruined credit. Under its benign influences, these great interests immediately awoke, as from the dead, and sprang forth with newness of life. Every year of its duration has teemed with fresh proofs of its utility and its blessings; and, although our territory has stretched out wider and wider, and our population spread farther and farther, they have not outrun its protection or its benefits. It has been to us all a copious fountain of national, social, and personal happiness. I have not allowed myself, sir, to look beyond the Union, to see what might lie hidden in the dark recess behind. I have not coolly weighed the chances of preserving liberty when the bonds that unite us together shall be broken asunder. I have not accustomed myself to hang over the precipice of disunion, to see whether, with my short sight, I can fathom the depth of the abyss below; nor, could I regard him as a safe counsellor in the affairs of this government, whose thoughts should be mainly bent on considering, not how the Union should be best preserved, but how tolerable might be the condition of the people when it shall be broken up and destroyed. While the Union lasts, we have high, exciting, gratifying prospects spread out before us, for us and our children. Beyond that I seek not to penetrate the veil. God grant that, in my day, at least, that curtain may not rise. God grant, that on my vision never may be opened what lies behind. When my eyes shall be turned to behold, for the last time, the sun in heaven, may I not see him shining on the broken and dishonored fragments of a once glorious Union, on States dissevered, discordant, belligerent, on a land rent with civil feuds, or drenched, it may be, in fraternal blood! Let their last feeble and lingering glance, rather behold the gorgeous ensign of the republic, now known and honored throughout the earth, still full high advanced, its arms and trophies streaming in their original lustre, not a stripe erased or polluted, nor a single star obscured—bearing for its motto, no such miserable interrog-

atory, as What is all this worth? Nor those other words of delusion and folly, Liberty first, and Union afterwards—but every where, spread all over in characters of living light, blazing on all its ample folds, as they float over the sea and over the land, and in every wind under the whole heavens, that other sentiment, dear to every true American heart —Liberty and Union, now and for ever, one and inseparable!

THE NULLIFICATION ORDINANCE

IT HAS BEEN SEEN that the whole question of the American system, and especially its prominent feature of a high protective tariff, was put in issue in the presidential canvass of 1832; and that the long session of Congress of that year was occupied by the friends of this system in bringing forward to the best advantage all its points, and staking its fate upon the issue of the election. That issue was against the system; and the Congress elections taking place contemporaneously with the presidential were of the same character. The fate of the American system was sealed. Its domination in federal legislation was to cease. This was acknowledged on all hands; and it was naturally expected that all the States, dissatisfied with that system, would be satisfied with the view of its speedy and regular extinction, under the legislation of the approaching session of Congress; and that expectation was only disappointed in a single State—that of South Carolina. She had held aloof from the presidential election—throwing away her vote upon citizens who were not candidates—and doing nothing to aid the election of General Jackson, with whose success her interests and wishes were apparently identified. Instead of quieting her apprehensions, and moderating her passion for violent remedies, the success of the election seemed to inflame them; and on the 24th of November, just a fortnight after the election which decided the fate of the tariff, she issued her ordinance of nullification against it, taking into her own hands the sudden and violent redress which she prescribed for herself. That ordinance makes an era in the history of our Union, which requires to be studied in order to understand the events of the times, and the history of subsequent events. It was in these words:

ORDINANCE

"An ordinance to nullify certain acts of the Congress of the United States, purporting to be laws laying duties and imposts on the importation of foreign commodities.

"Whereas, the Congress of the United States, by various acts, purporting to be acts laying duties and imposts on foreign imports, but in reality intended for the protection of domestic manufactures and the giving of bounties to classes and individuals engaged in particular employments, at the expense and to the injury and oppression of other classes and individuals, and by wholly exempting from taxation certain foreign commodities, such as are not produced or manufactured in the United States, to afford a pretext for imposing higher and excessive duties on articles similar to those intended to be protected, hath exceeded its just powers under the Constitution, which confers on it no authority to afford such protection, and hath violated the true meaning and intent of the Constitution, which provides for equality in imposing the burdens of taxation upon the several States and portions of the confederacy: And whereas the said Congress, exceeding its just power to impose taxes and collect revenue for the purpose of effecting and accomplishing the specific objects and purposes which the Constitution of the United States authorizes it to effect and accomplish, hath raised and collected unnecessary revenue for objects unauthorized by the Constitution.

"We, therefore, the people of the State of South Carolina, in convention assembled, do declare and ordain, and it is hereby declared and ordained, that the several acts and parts of acts of the Congress of the United States, purporting to be laws for the imposing of duties and imposts on the importation of foreign commodities, and now having actual operation and effect within the United States, and more especially, an act entitled 'An act in alteration of the several acts imposing duties on imports,' approved on the nineteenth day of May, one thousand eight hundred and twenty-eight, and also an act entitled 'An act to alter and amend the several acts imposing duties on imports,' approved on the fourteenth day of July, one thousand eight hundred and thirty-two, are unauthorized by the Constitution of the United States, and violate the true meaning and intent thereof, and are null, void, and no law, nor binding upon this State, its officers or citizens; and all promises, contracts, and obligations, made or entered into, or to be made or entered into, with purpose to secure the duties imposed by the said acts, and all judicial proceedings which shall be hereafter had in affirmance thereof, are and shall be held utterly null and void.

"And it is further ordained, that it shall not be lawful for any of the constituted authorities, whether of this State or of the United States, to enforce the payment of duties imposed by the said acts within the limits of this State; but it shall be the duty of the legislature to adopt such measures and pass such acts as may be necessary to give full

effect to this ordinance, and to prevent the enforcement and arrest the operation of the said acts and parts of acts of the Congress of the United States within the limits of this State, from and after the first day of February next, and the duty of all other constituted authorities, and of all persons residing or being within the limits of this State, and they are hereby required and enjoined to obey and give effect to this ordinance, and such acts and measures of the legislature as may be passed or adopted in obedience thereto.

"And it is further ordained, that in no case of law or equity, decided in the courts of this State, wherein shall be drawn in question the authority of this ordinance, or the validity of such act or acts of the legislature as may be passed for the purpose of giving effect thereto, or the validity of the aforesaid acts of Congress, imposing duties, shall any appeal be taken or allowed to the Supreme Court of the United States, nor shall any copy of the record be permitted or allowed for that purpose; and if any such appeal shall be attempted to be taken, the courts of this State shall proceed to execute and enforce their judgments, according to the laws and usages of the State, without reference to such attempted appeal, and the person or persons attempting to take such appeal may be dealt with as for a contempt of the court.

"And it is further ordained, that all persons now holding any office of honor, profit, or trust, civil or military, under this State (members of the legislature excepted), shall, within such time, and in such manner as the legislature shall prescribe, take an oath well and truly to obey, execute and enforce this ordinance, and such act or acts of the legislature as may be passed in pursuance thereof, according to the true intent and meaning of the same; and on the neglect or omission of any such person or persons so to do, his or their office or offices shall be forthwith vacated, and shall be filled up as if such person or persons were dead or had resigned; and no person hereafter elected to any office of honor, profit, or trust, civil or military (members of the legislature excepted), shall, until the legislature shall otherwise provide and direct, enter on the execution of his office, or be in any respect competent to discharge the duties thereof, until he shall, in like manner, have taken a similar oath; and no juror shall be empaneled in any of the courts of this State, in any cause in which shall be in question this ordinance, or any act of the legislature passed in pursuance thereof, unless he shall first, in addition to the usual oath, have taken an oath that he will well and truly obey, execute, and enforce this ordinance, and such act or acts of the legislature as may be passed to carry the same into operation and effect, according to the true intent and meaning thereof.

"And we, the people of South Carolina, to the end that it may be fully understood by the government of the United States, and the people of the co-states, that we are determined to maintain this our ordinance and declaration, at every hazard, do further declare that we will not submit to the application of force, on the part of the federal government, to reduce this State to obedience; but that we will consider the passage by Congress of any act authorizing the employment of a military or naval force against the State of South Carolina, her constitutional authorities or citizens; or any act abolishing or closing the

ports of this State, or any of them, or otherwise obstructing the free ingress and egress of vessels to and from the said ports, or any other act on the part of the federal government, to coerce the State, shut up her ports, destroy or harass her commerce, or to enforce the acts hereby declared to be null and void, otherwise than through the civil tribunals of the country, as inconsistent with the longer continuance of South Carolina in the Union; and that the people of this State will thenceforth hold themselves absolved from all further obligation to maintain or preserve their political connection with the people of the other States, and will forthwith proceed to organize a separate government, and do all other acts and things which sovereign and independent States may of right do.

"Done in convention at Columbia, the twenty-fourth day of November, in the year of our Lord one thousand eight hundred and thirty-two, and in the fifty-seventh year of the declaration of the independence of the United States of America."

This ordinance placed the State in the attitude of open, forcible resistance to the laws of the United States, to take effect on the first day of February next ensuing—a period within which it was hardly possible for the existing Congress, even if so disposed, to ameliorate obnoxious laws; and a period a month earlier than the commencement of the legal existence of the new Congress, on which all reliance was placed. And in the meantime, if any attempt should be made in any way to enforce the obnoxious laws except through her own tribunals sworn against them, the fact of such attempt was to terminate the continuance of South Carolina in the Union—to absolve her from all connection with the federal government—and to establish her as a separate government, not only unconnected with the United States, but unconnected with any one State. This ordinance, signed by more than a hundred citizens of the greatest respectability, was officially communicated to the President of the United States; and a case presented to him to test his patriotism, his courage, and his fidelity to his inauguration oath—an oath taken in the presence of God and man, of Heaven and earth, "to take care that the laws of the Union were faithfully executed." That President was Jackson; and the event soon proved, what in fact no one doubted, that he was not false to his duty, his country and his oath. Without calling on Congress for extraordinary powers, he merely adverted in his annual message to the attitude of the State, and proceeded to meet the exigency by the exercise of the powers he already possessed.—Benton, "Thirty Years' View."

ANDREW JACKSON

Andrew Jackson was born on the border between North and South Carolina, March 15, 1767. His education hardly included reading, writing and arithmetic. Although only a boy he was carried as a prisoner to Camden by the British and cut with an officer's sword because he would not turn bootblack. His father had died before his birth and his mother and two brothers died from hardship during the war. Thus left alone in the world he worked a while for a saddler, then tried to study law in Salisbury. He was said to have been "the most roaring, rollicking, game-cocking, horse-racing, card-playing, mischievous" youngster in town. He was admitted to the bar in 1786 and in 1788 removed to Nashville. Washington appointed him attorney for the new Territory of Tennessee in 1790. He was Representative from the new State in 1796 and Senator in 1797; from 1798 to 1804 he was one of the Chief Justices of the State. From 1804 to 1812 he lived on his farm, but his irascible temper involved him in several duels, in one of which he killed his opponent.

Since 1801 he had been at the head of the Tennessee militia and in 1812 volunteered for the war. In the Creek War Jackson in conjunction with Col. Coffee won a number of victories that gave him a national reputation. He was made a Major-General of the army, defended Mobile, seized Pensacola and immediately transferred his command to defend New Orleans (1814).

The British expedition against Louisiana was the most formidable of the war, and was intended to win the territory west of the Mississippi permanently.

Wellington's brother-in-law, General Packingham, with 12,000 of Wellington's veterans had been sent to do the work. Jackson had 6,000 Kentucky and Tennessee riflemen. On January 8th, the British made a direct assault, but were repulsed with the fearful loss of 2,600 killed and wounded while Jackson's loss was 8 killed and 13 wounded.

In 1817 Jackson followed the Seminoles into Florida and practically took possession of the country. His act aroused great criticism, but the

matter was settled by Spain selling the Floridas to the United States.

In 1824 he was nominated by his state legislature for the Presidency, but although he had the greatest number of electoral votes, yet when the election devolved upon the House the adherents of Clay and Adams combined to elect Adams. Jackson by this time had become the representative of the new Western Democracy and was by far the most popular man in the country. His democratic ideas stopped the selection of electors by state legislatures and brought in the system of caucuses and conventions.

In 1828 he was elected President. One of his first acts was to discharge the office-holders under his control and appoint his own adherents. His main justification is that he believed there was growing up an office-holding class.

Jackson was no believer in protective tariffs, yet the friends of nullification found themselves rudely disillusioned when they imagined he would support them in defying the laws. Jackson's prompt measures in South Carolina ended the possibility of any one State annulling a National law or seceding from the Union.

Jackson was re-elected in 1832. In 1833 he removed the deposits from the National bank; thus forcing it finally to take refuge under the Pennsylvania law. It is but fair to Jackson to say that the bank afterward suspended payment during the panic in 1837, again in 1839, and finally in 1840, when it was found that there was nothing left for the stockholders.

Jackson died June 8, 1845. His last years were as tranquil as the first were strenuous. He has been fiercely assailed, and it is unquestionable that he was a man of violent temper and obstinate independence, but he was certainly a great general and his public acts, although many of them were done with a sort of rash promptness, have had an enormous influence in strengthening and enlarging the Union and the power of the people.

PROCLAMATION AGAINST NULLIFICATION

The ordinance of nullification reached President Jackson in the first days of December, and on the tenth of that month the proclamation was issued, of which the following are the essential and leading parts:

"Whereas a convention assembled in the State of South Carolina

have passed an ordinance, by which they declare 'that the several acts and parts of acts of the Congress of the United States, purporting to be laws for the imposing of duties and imposts on the importation of foreign commodities, and now having actual operation and effect within the United States, and more especially' two acts for the same purposes, passed on the 29th of May, 1828, and on the 14th of July, 1832, 'are unauthorized by the Constitution of the United States, and violate the true meaning and intent thereof, and are null and void, and no law,' nor binding on the citizens of that State, or its officers: and by the said ordinance it is further declared to be unlawful for any of the constituted authorities of the State or of the United States to enforce the payment of the duties imposed by the said acts within the same State, and that it is the duty of the legislature to pass such laws as may be necessary to give full effect to the said ordinance:

"And whereas, by the said ordinance, it is further ordained, that in no case of law or equity decided in the courts of said State, wherein shall be drawn in question the validity of the said ordinance, or of the acts of the legislature that may be passed to give it effect, or of the said laws of the United States, no appeal shall be allowed to the Supreme Court of the United States, nor shall any copy of the record be permitted or allowed for that purpose, and that any person attempting to take such appeal shall be punished as for a contempt of court:

"And, finally, the said ordinance declares that the people of South Carolina will maintain the said ordinance at every hazard; and that they will consider the passage of any act by Congress, abolishing or closing the ports of the said State, or otherwise obstructing the free ingress or egress of vessels to and from the said ports, or any other act of the federal government to coerce the State, to shut up her ports, destroy or harass her commerce, or to enforce the said acts otherwise than through the civil tribunals of the country, as inconsistent with the longer continuance of South Carolina in the Union; and that the people of the said State will thenceforth hold themselves absolved from all further obligation to maintain or preserve their political connection with the people of the other States, and will forthwith proceed to organize a separate government, and do all other acts and things which sovereign and independent States may of right do:

"And whereas the said ordinance prescribes to the people of South Carolina a course of conduct in direct violation of their duty as citizens of the United States, contrary to the laws of their country, sub-

versive of its Constitution, and having for its object the destruction of the Union—that Union which, coeval with our political existence, led our fathers, without any other ties to unite them than those of patriotism and a common cause, through a sanguinary struggle to a glorious independence—that sacred Union, hitherto inviolate, which, perfected by our happy Constitution, has brought us, by the favor of Heaven, to a state of prosperity at home, and high consideration abroad, rarely, if ever, equaled in the history of nations: To preserve this bond of our political existence from destruction, to maintain inviolate this state of national honor and prosperity, and to justify the confidence my fellow-citizens have reposed in me, I, Andrew Jackson, President of the United States, have thought proper to issue this my proclamation, stating my views of the Constitution and laws applicable to the measures adopted by the convention of South Carolina, and to the reasons they have put forth to sustain them, declaring the course which duty will require me to pursue, and, appealing to the understanding and patriotism of the people, warn them of the consequences that must inevitably result from an observance of the dictates of the convention.

"Strict duty would require of me nothing more than the exercise of those powers with which I am now, or may hereafter be, invested, for preserving the peace of the Union, and for the execution of the laws. But the imposing aspect which opposition has assumed in this case, by clothing itself with State authority, and the deep interest which the people of the United States must feel in preventing a resort to stronger measures, while there is a hope that anything will be yielded to reasoning and remonstrance, perhaps demanded, and will certainly justify a full exposition to South Carolina and the nation of the views I entertain of this important question, as well as a distinct enunciation of the course which my sense of duty will require me to pursue.

"The ordinance is founded, not on the indefeasible right of resisting acts which are plainly unconstitutional and too oppressive to be endured, but on the strange position that any one State may not only declare an act of Congress void, but prohibit its execution; that they may do this consistently with the Constitution; that the true construction of that instrument permits a State to retain its place in the Union, and yet be bound by no other of its laws than those it may choose to consider as constitutional. It is true, they add, that to justify this abrogation of a law, it must be palpably contrary to the Constitution; but it is evident, that to give the right of resisting laws of that description,

coupled with the uncontrolled right to decide what laws deserve that character, is to give the power of resisting all laws. For as, by the theory, there is no appeal, the reasons alleged by the State, good or bad, must prevail. If it should be said that public opinion is a sufficient check against the abuse of this power, it may be asked why it is not deemed a sufficient guard against the passage of an unconstitutional act by Congress. There is, however, a restraint in this last case, which makes the assumed power of a State more indefensible, and which does not exist in the other. There are two appeals from an unconstitutional act passed by Congress—one to the judiciary, the other to the people and the States. There is no appeal from the State decision in theory, and the practical illustration shows that the courts are closed against an application to review it, both judges and jurors being sworn to decide in its favor. But reasoning on this subject is superfluous, when our social compact, in express terms, declares that the laws of the United States, its Constitution, and treaties made under it, are the supreme law of the land; and, for greater caution, adds 'that the judges in every State shall be bound thereby, anything in the constitution or laws of any State to the contrary notwithstanding.' And it may be asserted without fear of refutation, that no federative government could exist without a similar provision. Look for a moment to the consequence. If South Carolina considers the revenue laws unconstitutional, and has a right to prevent their execution in the port of Charleston, there would be a clear constitutional objection to their collection in every other port, and no revenue could be collected anywhere; for all imposts must be equal. It is no answer to repeat that an unconstitutional law is no law, so long as the question of its legality is to be decided by the State itself; for every law operating injuriously upon any local interest will be perhaps thought, and certainly represented, as unconstitutional, and, as has been shown, there is no appeal.

"If this doctrine had been established at an earlier day, the Union would have been dissolved in its infancy. The excise law in Pennsylvania, the embargo and non-intercourse law in the Eastern States, the carriage tax in Virginia, were all deemed unconstitutional, and were more unequal in their operation than any of the laws now complained of; but fortunately none of those States discovered that they had the right now claimed by South Carolina. The war, into which we were forced to support the dignity of the nation and the rights of our citizens, might have ended in defeat and disgrace, instead of victory and

honor, if the States who supposed it a ruinous and unconstitutional measure, had thought they possessed the right of nullifying the act by which it was declared, and denying supplies for its prosecution. Hardly and unequally as those measures bore upon several members of the Union, to the legislatures of none did this efficient and peaceable remedy, as it is called, suggest itself. The discovery of this important feature in our Constitution was reserved to the present day. To the statesmen of South Carolina belongs the invention, and upon the citizens of that State will unfortunately fall the evils of reducing it to practice.

"If the doctrine of a State veto upon the laws of the Union carries with it internal evidence of its impracticable absurdity, our constitutional history will also afford abundant proof that it would have been repudiated with indignation had it been proposed to form a feature in our government.

"In our colonial state, although dependent on another power, we very early considered ourselves as connected by common interest with each other. Leagues were formed for common defense, and, before the declaration of independence we were known in our aggregate character as the United Colonies of America. That decisive and important step was taken jointly. We declared ourselves a nation by a joint, not by several acts, and when the terms of our confederation were reduced to form, it was in that of a solemn league of several States, by which they agreed that they would collectively form one nation for the purpose of conducting some certain domestic concerns and all foreign relations. In the instrument forming that Union is found an article which declares that 'every State shall abide by the determinations of Congress on all questions which, by that confederation, should be submitted to them.'

"Under the confederation, then, no State could legally annul a decision of the Congress, or refuse to submit to its execution; but no provision was made to enforce these decisions. Congress made requisitions, but they were not complied with. The government could not operate on individuals. They had no judiciary, no means of collecting revenue.

"But the defects of the confederation need not be detailed. Under its operation we could scarcely be called a nation. We had neither prosperity at home, nor consideration abroad. This state of things could not be endured, and our present happy Constitution was formed, but formed in vain, if this fatal doctrine prevail. It was formed for important objects that are announced in the preamble made in the name and by the authority of the people of the United States, whose delegates

framed, and whose conventions approved it. The most important among these objects, that which is placed first in rank, on which all the others rest, is 'to form a more perfect Union.' Now, is it possible that even if there were no express provision giving supremacy to the Constitution and laws of the United States over those of the States —can it be conceived that an instrument made for the purpose of 'forming a more perfect Union' than that of the confederation, could be so constructed by the assembled wisdom of our country, as to substitute for that confederation a form of government dependent for its existence on the local interest, the party spirit of a State, or of a prevailing faction in a State? Every man of plain, unsophisticated understanding, who hears the question, will give such an answer as will preserve the Union. Metaphysical subtlety, in pursuit of an impracticable theory, could alone have devised one that is calculated to destroy it.

"The Constitution declares that the judicial powers of the United States extend to cases arising under the laws of the United States, and that such laws, the Constitution and treaties shall be paramount to the State constitutions and laws. The judiciary act prescribes the mode by which the case may be brought before a court of the United States: by appeal, when a State tribunal shall decide against this provision of the Constitution. The ordinance declares there shall be no appeal; makes the State law paramount to the Constitution and laws of the United States; forces judges and jurors to swear that they will disregard their provisions; and even makes it penal in a suitor to attempt relief by appeal. It further declares that it shall not be lawful for the authorities of the United States, or of that State, to enforce the payment of duties imposed by the revenue laws within its limits.

"Here is a law of the United States, not even pretended to be unconstitutional, repealed by the authority of a small majority of the voters of a single State. Here is a provision of the Constitution which is solemnly abrogated by the same authority.

"On such expositions and reasonings, the ordinance grounds not only an assertion of the right to annul the laws of which it complains, but to enforce it by a threat of seceding from the Union, if any attempt is made to execute them.

"This right to secede is deduced from the nature of the Constitution, which, they say, is a compact between sovereign States, who have preserved their whole sovereignty, and, therefore, are subject to no

superior; that, because they made the compact, they can break it when, in their opinion, it has been departed from by the other States. Fallacious as this course of reasoning is, it enlists State pride, and finds advocates in the honest prejudices of those who have not studied the nature of our government sufficiently to see the radical error on which it rests.

"The people of the United States formed the Constitution, acting through the State legislatures in making the compact, to meet and discuss its provisions, and acting in separate conventions when they ratified those provisions; but the terms used in its construction show it to be a government in which the people of all the States collectively are represented. We are one people in the choice of the President and Vice-President. Here the States have no other agency than to direct the mode in which the votes shall be given. Candidates having the majority of all the votes are chosen. The electors of a majority of States may have given their votes for one candidate, and yet another may be chosen. The people, then, and not the States, are represented in the executive branch.

"In the House of Representatives there is this difference: that the people of one State do not, as in the case of President and Vice-President, all vote for the same officers. The people of all the States do not vote for all the members, each State electing only its own representatives. But this creates no material distinction. When chosen, they are all representatives of the United States, not representatives of the particular State from which they come. They are paid by the United States, not by the State, nor are they accountable to it for any act done in the performance of their legislative functions; and however they may in practice, as it is their duty to do, consult and prefer the interests of their particular constituents, when they come in conflict with any other partial or local interest, yet it is their first and highest duty, as representatives of the United States, to promote the general good.

"The Constitution of the United States, then, forms a government, not a league; and whether it be formed by compact between the States, or in any other manner, its character is the same. It is a government in which all the people are represented, which operates directly on the people individually, not upon the States—they retained all the power they did not grant. But each State, having expressly parted with so many powers as to constitute, jointly with the other States, a single nation, cannot, from that period, possess any right to secede, because

such secession does not break a league, but destroys the unity of a nation; and any injury to that unity is not only a breach which would result from the contravention of a compact, but it is an offense against the whole Union. To say that any State may at pleasure secede from the Union, is to say that the United States are not a nation; because it would be a solecism to contend that any part of a nation might dissolve its connection with the other parts, to their injury or ruin, without committing any offense. Secession, like any other revolutionary act, may be morally justified by the extremity of oppression; but, to call it a constitutional right, is confounding the meaning of terms; and can only be done through gross error, or to deceive those who are willing to assert a right, but would pause before they made a revolution, or incur the penalties consequent on a failure.

"Fellow-citizens of my native State, let me not only admonish you, as the First Magistrate of our common country, not to incur the penalty of its laws, but use the influence that a father would over his children whom he saw rushing to certain ruin. In that paternal language, with that paternal feeling, let me tell you, my countrymen, that you are deluded by men who are either deceived themselves, or wish to deceive you. Mark under what pretenses you have been led on to the brink of insurrection and treason, on which you stand! First, a diminution of the value of your staple commodity, lowered by over-production in other quarters, and the consequent diminution in the value of your lands, were the sole effect of the tariff laws.

"The effect of those laws was confessedly injurious, but the evil was greatly exaggerated by the unfounded theory you were taught to believe, that its burdens were in proportion to your exports, not to your consumption of imported articles. Your pride was roused by the assertion that a submission to those laws was a state of vassalage, and that resistance to them was equal, in patriotic merit, to the oppositions our fathers offered to the oppressive laws of Great Britain. You were told this opposition might be peaceably, might be constitutionally made; that you might enjoy all the advantages of the Union, and bear none of its burdens. Eloquent appeals to your passions, to your State pride, to your native courage, to your sense of real injury, were used to prepare you for the period when the mask, which concealed the hideous features of disunion, should be taken off. It fell, and you were made to look with complacency on objects which, not long since, you would have regarded with horror. Look back to the arts which have brought you

to this state; look forward to the consequences to which it must inevitably lead! Look back to what was first told you as an inducement to enter into this dangerous course. The great political truth was repeated to you, that you had the revolutionary right of resisting all laws that were palpably unconstitutional and intolerably oppressive; it was added that the right to nullify a law rested on the same principle, but that it was a peaceable remedy! This character which was given to it, made you receive with too much confidence the assertions that were made of the unconstitutionality of the law and its oppressive effects. Mark, my fellow-citizens, that, by the admission of your leaders, the unconstitutionality must be palpable, or it will not justify either resistance or nullification! What is the meaning of the word palpable, in the sense in which it is here used? That which is apparent to every one; that which no man of ordinary intellect will fail to perceive. Is the unconstitutionality of these laws of that description? Let those among your leaders who once approved and advocated the principle of protective duties, answer the question; and let them choose whether they will be considered as incapable, then, of perceiving that which must have been apparent to every man of common understanding, or as imposing upon your confidence, and endeavoring to mislead you now. In either case they are unsafe guides in the perilous path they urge you to tread. Ponder well on this circumstance, and you will know how to appreciate the exaggerated language they address to you. They are not champions of liberty emulating the fame of our revolutionary fathers; nor are you an oppressed people, contending, as they repeat to you, against worse than colonial vassalage.

"You are free members of a flourishing and happy Union. There is no settled design to oppress you. You have indeed felt the unequal operation of laws which may have been unwisely, not unconstitutionally passed; but that inequality must necessarily be removed. At the very moment when you were madly urged on to the unfortunate course you have begun, a change in public opinion had commenced. The nearly approaching payment of the public debt, and the consequent necessity of a diminution of duties, had already produced a considerable reduction, and that, too, on some articles of general consumption in your State. The importance of this change was underrated, and you were authoritatively told that no further alleviation of your burdens was to be expected, at the very time when the condition of the country imperiously demanded such a modification of the duties as should reduce them to a

just and equitable scale. But, as if apprehensive of the effect of this change in allaying your discontents, you were precipitated into that fearful state in which you now find yourselves.

"I adjure you, as you honor their memory; as you love the cause of freedom, to which they dedicated their lives; as you prize the peace of your country, the lives of its best citizens, and your own fair name, to retrace your steps. Snatch from the archives of your State the disorganizing edict of its convention; bid its members to reassemble, and promulgate the decided expressions of your will to remain in the path which alone can conduct you to safety, prosperity and honor. Tell them that, compared to disunion, all other evils are light, because that brings with it an accumulation of all. Declare that you will never take the field unless the star-spangled banner of your country shall float over you; that you will not be stigmatized when dead, and dishonored and scorned while you live, as the authors of the first attack on the Constitution of your country. Its destroyers you cannot be. You may disturb its peace, you may interrupt the course of its prosperity, you may cloud its reputation for stability, but its tranquility will be restored, its prosperity will return, and the stain upon its national character will be transferred, and remain an eternal blot on the memory of those who caused the disorder.

"Fellow-citizens of the United States, the threat of unhallowed disunion, the names of those, once respected, by whom it is uttered, the array of military force to support it, denote the approach of a crisis in our affairs, on which the continuance of our unexampled prosperity, our political existence, and perhaps that of all free governments, may depend. The conjuncture demanded a free, a full, and explicit enunciation, not only of my intentions, but of my principles of action; and, as the claim was asserted of a right by a State to annul the laws of the Union, and even to secede from it at pleasure, a frank exposition of my opinions in relation to the origin and form of our government, and the construction I give to the instrument by which it was created, seemed to be proper. Having the fullest confidence in the justness of the legal and constitutional opinion of my duties, which has been expressed, I rely, with equal confidence, on your undivided support in my determination to execute the laws, to preserve the Union by all constitutional means, to arrest, if possible, by moderate, but firm measures, the necessity of a recourse to force; and, if it be the will of Heaven that the recurrence of its primeval curse on man for the shedding of a brother's

blood should fall upon our land, that it be not called down by any offensive act on the part of the United States.

"Fellow-citizens: The momentous case is before you. On your undivided support of your government depends the decision of the great question it involves, whether your sacred Union will be preserved, and the blessings it secures to us as one people shall be perpetuated. No one can doubt that the unanimity with which that decision will be expressed, will be such as to inspire new confidence in republican institutions, and that the prudence, the wisdom, and the courage which it will bring to their defense, will transmit them unimpaired and invigorated to our children."—Benton, "Thirty Years' View."

HENRY CLAY

THE COMPROMISE OF 1833

On the 12th of February Mr. Clay asked leave to introduce a bill for the reduction of duties, styled by him a "compromise" measure; and prefaced the question with a speech, of which the following are parts:

"In presenting the modification of the tariff laws which I am now about to submit, I have two great objects in view. My first object looks to the tariff. I am compelled to express the opinion, formed after the most deliberate reflection, and on a full survey of the whole country, that, whether rightfully or wrongfully, the tariff stands in imminent danger. If it should even be preserved during this session, it must fall at the next session. By what circumstances, and through what causes, has arisen the necessity for this change in the policy of our country, I will not pretend now to elucidate. Others there are who may differ from the impressions which my mind has received upon this point. Owing, however, to a variety of concurrent causes, the tariff, as it now exists, is in imminent danger; and if the system can be preserved beyond the next session, it must be by some means not now within the reach of human sagacity. The fall of that policy, sir, would be productive of consequences calamitous indeed. When I look to the variety of inter-

ests which are involved, to the number of individuals interested, the amount of capital invested, the value of the buildings erected, and the whole arrangement of the business for the prosecution of the various branches of the manufacturing art which have sprung up under the fostering care of this government, I cannot contemplate any evil equal to the sudden overthrow of all those interests. History can produce no parallel to the extent of the mischief which would be produced by such a disaster. The repeal of the Edict of Nantes itself was nothing in comparison with it. That condemned to exile and brought to ruin a great number of persons. The most respectable portion of the population of France were condemned to exile and ruin by that measure. But in my opinion, sir, the sudden repeal of the tariff policy would bring ruin and destruction on the whole people of this country. There is no evil, in my opinion, equal to the consequences which would result from such a catastrophe.

"I believe the American system to be in the greatest danger; and I believe it can be placed on a better and safer foundation at this session than at the next. I heard, with surprise, my friend from Massachusetts say that nothing had occurred within the last six months to increase its hazard. I entreat him to review that opinion. Is it correct? Is the issue of numerous elections, including that of the highest officer of the government, nothing? Is the explicit recommendation of that officer, in his message at the opening of the session, sustained, as he is, by a recent triumphant election, nothing? Is his declaration in his proclamation, that the burdens of the South ought to be relieved, nothing? Is the introduction of the bill in the House of Representatives during this session, sanctioned by the head of the treasury and the administration, prostrating the greater part of the manufactures of the country, nothing? Are the increasing discontents, nothing? Is the tendency of recent events to unite the whole South, nothing? What have we not witnessed in this chamber? Friends of the administration bursting all the ties which seemed indissolubly to unite them to its chief, and, with few exceptions south of the Potomac, opposing, and vehemently opposing, a favorite measure of that administration, which three short months ago they contributed to establish? Let us not deceive ourselves. Now is the time to adjust the question in a manner satisfactory to both parties. Put it off until the next session, and the alternative may, and probably then would be, a speedy and ruinous reduction of the tariff, or a civil war with the entire South.

"It is well known that the majority of the dominant party is adverse to the tariff. There are many honorable exceptions, the senator from New Jersey (Mr. Dickerson) among them. But for the exertions of the other party, the tariff would have been long since sacrificed. Now let us look at the composition of the two branches of Congress at the next session. In this body we lose three friends of the protective policy, without being sure of gaining one. Here, judging from the present appearances, we shall, at the next session, be in the minority. In the House it is notorious that there is a considerable accession to the number of the dominant party. How, then, I ask, is the system to be sustained against numbers, against the whole weight of the administration, against the united South, and against the increasing impending danger of civil war?

"I have been represented as the father of this system, and I am charged with an unnatural abandonment of my own offspring. I have never arrogated to myself any such intimate relation to it. I have, indeed, cherished it with parental fondness, and my affection is undiminished. But in what condition do I find this child? It is in the hands of the Philistines, who would strangle it. I fly to its rescue, to snatch it from their custody, and to place it on a bed of security and repose for nine years, where it may grow and strengthen, and become acceptable to the whole people. I behold a torch about being applied to a favorite edifice, and I would save it, if possible, before it was wrapt in flames, or at least preserve the precious furniture which it contains."

Mr. Clay further advanced another reason for his bill, and which was a wish to separate the tariff from politics and elections—a wish which admitted their connection—and which, being afterwards interpreted by events, was supposed to be the basis of the coalition with Mr. Calhoun; both of them having tried the virtue of the tariff question in elections, and found it unavailing either to friends or foes. Mr. Clay, its champion, could not become President upon its support. Mr. Calhoun, its antagonist, could not become President upon its opposition. To both it was equally desirable, as an unavailable element in elections, and as a stumbling-block to both in future, that it should be withdrawn for some years from the political arena; and Mr. Clay thus expressed himself in relation to that withdrawal:

"I wish to see the tariff separated from the politics of the country, that business men may go to work in security, with some prospect of stability in our laws, and without everything being staked on the issue of elections, as it were on the hazards of the die."

Mr. Clay then explained the principle of his bill, which was a series of annual reductions of one-tenth per cent. on the value of all duties above twenty per cent. for eight successive years; and after that, the reduction of all the remainder above twenty per centum to that rate by two annual reductions of the excess: so as to complete the reduction to twenty per centum on the value of all imported goods on the 30th day of September, 1842; with a total abolition of duties on about one hundred articles after that time; and with a proviso in favor of the right of Congress, in the event of war with any foreign power to impose such duties as might be necessary to prosecute the war.—Benton, "Thirty Years' View."

JAMES MONROE

James Monroe was born in the county of Westmoreland, Virginia, April 28, 1758. The family was supposed to be of Scottish descent.

At the outbreak of the revolution Monroe was attending the College of William and Mary, but left to take part in the war. In 1780 he began to study law under Jefferson and continued one of Jefferson's disciples all his life.

He opposed the ratification of the new Constitution in 1788, but was nevertheless chosen United States Senator in 1790. He was an anti-Federalist in his views and probably because he was in sympathy with the French revolution Washington sent him as ambassador to France. The Directory was at this time in very much of a huff over the Jay treaty with England, and Monroe did not represent the policy of the administration and was therefore recalled in 1796. Beginning in 1799 he was three times elected governor of Virginia. In 1803 Jefferson sent him to France to act with Minister Livingston in the purchase of New Orleans. Livingston and Monroe found they had a chance to purchase the whole territory of Louisiana and grasped at it.

In 1814 Monroe was made Secretary of War by Madison and did much to infuse more energy into the war.

He was elected President in 1816 and 1820. He accomplished his

long cherished plan of buying the Floridas from Spain in 1819. In 1823, when it seemed as if the Holy Alliance might intervene to aid Spain in reconquering her American Colonies, he gave notice in his seventh annual message that such an intervention would not be considered friendly to the United States and that America was no longer to be considered a field for colonization. This is now known as the Monroe Doctrine. He died on the Fourth of July, 1831.

THE MONROE DOCTRINE

At the proposal of the Russian imperial government, made through the minister of the emperor residing here, a full power and instructions have been transmitted to the minister of the United States at St. Petersburgh, to arrange, by amicable negotiation, the respective rights and interests of the two nations on the northwest coast of this continent. A similar proposal had been made by his imperial majesty to the government of Great Britain, which has likewise been acceded to. The government of the United States has been desirous, by this friendly proceeding, of manifesting the great value which they have invariably attached to the friendship of the emperor, and their solicitude to cultivate the best understanding with his government. In the discussions to which this interest has given rise, and in the arrangements by which they may terminate, the occasion has been judged proper for asserting, as a principle in which the rights and interests of the United States are involved, that the American continents, by the free and independent condition which they have assumed and maintain, are henceforth not to be considered as subjects for future colonization by any European powers.

It was stated, at the commencement of the last session, that a great effort was then making in Spain and Portugal, to improve the condition of the people of those countries, and that it appeared to be conducted with extraordinary moderation. It need scarcely be remarked that the result has been, so far, very different from what was then anticipated. Of events in that quarter of the globe, with which we have so much intercourse and from which we derive our origin, we have always been anxious and interested spectators. The citizens of the United States cherish sentiments the most friendly in favor of the liberty and happiness of their fellow-men on that side of the Atlantic. In the wars of the European powers, in matters relating to themselves, we have never

taken any part, nor does it comport with our policy so to do. It is only when our rights are invaded or seriously menaced, that we resent injuries or make preparation for our defense. With the movements in this hemisphere we are of necessity more immediately connected, and by causes which must be obvious to all enlightened and impartial observers. The political system of the allied powers is essentially different in this respect from that of America. This difference proceeds from that which exists in their respective governments. And to the defence of our own, which has been achieved by the loss of so much blood and treasure, and matured by the wisdom of their most enlightened citizens, and under which we have enjoyed unexampled felicity, this whole nation is devoted. We owe it, therefore, to candor, and to the amicable relations existing between the United States and those powers, to declare, that we should consider any attempt on their part to extend their system to any portion of this hemisphere as dangerous to our peace and safety. With the existing colonies or dependencies of any European power we have not interfered, and shall not interfere. But with the governments who have declared their independence, and maintained it, and whose independence we have, on great consideration and on just principles, acknowledged, we could not view any interposition for the purpose of oppressing them, or controlling in any other manner their destiny, by any European power, in any other light than as the manifestation of an unfriendly disposition toward the United States. In the war between those new governments and Spain, we declared our neutrality at the time of their recognition, and to this we have adhered, and shall continue to adhere, provided no change shall occur which, in the judgment of the competent authorities of this government, shall make a corresponding change on the part of the United States indispensable to their security.

The late events in Spain and Portugal show that Europe is still unsettled. Of this important fact no stronger proof can be adduced, than that the allied powers should have thought it proper, on a principle satisfactory to themselves, to have interposed by force in the internal concerns of Spain. To what extent such interposition may be carried, on the same principle, is a question to which all independent powers, whose governments differ from theirs, are interested; even those most remote, and surely none more so than the United States. Our policy in regard to Europe, which was adopted at an early stage of the wars which have so long agitated that quarter of the globe, nevertheless remains the

same, which is, not to interfere in the internal concerns of any of its powers; to consider the government, *de facto,* as the legitimate government for us; to cultivate friendly relations with it, and to preserve those relations by a frank, firm, and manly policy; meeting, in all instances, the just claims of every power, submitting to injuries from none. But in regard to these continents, circumstances are eminently and conspicuously different. It is impossible that the allied powers should extend their political system to any portion of either continent without endangering our peace and happiness; nor can any one believe that our southern brethren, if left to themselves, would adopt it of their own accord. It is equally impossible, therefore, that we should behold such interposition, in any form, with indifference. If we look to the comparative strength and resources of Spain and those new governments, and their distance from each other, it must be obvious that she can never subdue them. It is still the true policy of the United States to leave the parties to themselves, in the hope that other powers will pursue the same course.

ECONOMICS

THE ECONOMIC IDEAS of Adam Smith, as Pultenay said in 1797, convinced the thoughtful of the living generation and ruled the next. But before we find a political application of them in the repeal of the corn laws and English free trade, the system had been more minutely developed and several important new ideas had been added.

In 1791 Alexander Hamilton in his Report on Manufactures reviewed the question of protection and free trade. It is the first great argument,—and a classical one,—for protection, since it was forced to defend itself against Smith's doctrines. Hamilton argues for the greater productiveness of manufactures, for the national necessity of their existence, and for the superiority of a tariff for protection as against a tariff for revenue. His "Report" is given in the first of this volume.

In 1798 Malthus developed his principle of population—that population naturally increases far faster than food, and that it always increases up to the very limit of sustenance. The importance of this idea in its applications is enormous. It has been used to explain such diverse things as the poverty of the lowest classes and the evolution of species.

Ricardo (1772-1823) is perhaps the most abstract theorist of the Adam Smith school. The principle for which he is particularly noted is his theory of rent—that rent is the difference between the production of any given land and the poorest forced into use. Rent would not, therefore, affect the price of the product. He considered that price depends upon the quantity of labor required in production. Capital he treats as accumulated labor. Starting from Malthus' theory of the

increase of population, he developed his "iron law of wages" that the lowest wages will always be just sufficient to sustain life.

Jean Baptiste Say (1767-1832) was probably the first French writer to disseminate the views of the new school. One idea traceable to him is the denial of the possibility of a general over-production.

Sismondi (1773-1842) protested against the doctrine of *laissez faire* and believed in some sort of government intervention to regulate the progress of wealth.

Taken altogether, political economy, in the first third of the century, is marked by a rapidly growing popularity and dissemination, and by the development of these few important principles. It must be remembered, however, that it is often the work of a century to develop one great idea in a given field.

MALTHUS

Thomas Robert Malthus was born on a small estate owned by his father in the county of Surrey in 1766. He received his secondary education from private tutors and was sent to Cambridge in 1784, becoming a fellow of his college in 1797. The same year he took orders and assumed charge of a small parish in Surrey, though he still retained his fellowship.

He published his *Essay on the Principle of Population as It Affects the Future Improvement of Society* in 1798. This was much enlarged in later editions. In the essay Malthus develops the idea that population has a constant tendency to increase faster than the means of subsistence. The consequences of this principle are of the greatest importance. From it would follow the iron law that the lowest order of humanity must always be on the verge of starvation, because population will increase beyond the utmost limit of a fair subsistence.

Malthus died in 1834, having been for almost thirty years before his death Professor of Political Economy in the East India Company's college at Haileybury. He was one of the first modern investigators in Social Science and his work has had an immense influence.

AN ESSAY ON THE PRINCIPLE OF POPULATION

In an inquiry concerning the improvement of society, the mode of conducting the subject which naturally presents itself, is

1. An investigation of the causes that have hitherto impeded the progress of mankind towards happiness; and,

2. An examination into the probability of the total or partial removal of these causes in future.

To enter fully into this question, and to enumerate all the causes that have hitherto influenced human improvement, would be much beyond the power of an individual. The principal object of the present essay is to examine the effects of one great cause intimately united with the very nature of man, which, though it has been constantly and powerfully operating since the commencement of society, has been little noticed by the writers who have treated this subject. The facts which establish the existence of this cause have, indeed, been repeatedly stated and acknowledged; but its natural and necessary effects have been almost totally overlooked; though probably among these effects may be reckoned a very considerable portion of that vice and misery, and of that unequal distribution of the bounties of nature, which it has been the unceasing object of the enlightened philanthropist in all ages to correct.

The cause to which I allude, is the constant tendency in all animated life to increase beyond the nourishment prepared for it.

It is observed by Dr. Franklin, that there is no bound to the prolific nature of plants or animals, but what is made by their crowding and interfering with each other's means of subsistence. Were the face of the earth, he says, vacant of other plants, it might be gradually sowed and overspread with one kind only; as, for instance, with fennel: and were it empty of other inhabitants, it might in a few ages be replenished from one nation only; as, for instance, with Englishmen.

This is incontrovertibly true. Throughout the animal and vegetable kingdoms Nature has scattered the seeds of life abroad with the most profuse and liberal hand; but has been comparatively sparing in the room and the nourishment necessary to rear them. The germs of existence contained in this spot of earth, with ample food, and ample room to expand in, would fill millions of worlds in the course of a few

thousand years. Necessity, that imperious, all-pervading law of nature, restrains them within the prescribed bounds. The race of plants and the race of animals shrink under this great restrictive law; and man cannot by any efforts of reason escape from it.

In plants and animals, the view of the subject is simple. They are all impelled by a powerful instinct to the increase of their species; and this instinct is interrupted by no doubts about providing for their offspring. Wherever, therefore, there is liberty, the power of increase is exerted; and the superabundant effects are repressed afterwards by want of room and nourishment, which is common to plants and animals; and among animals, by their becoming the prey of each other.

The effects of this check on man are more complicated. Impelled to the increase of his species by an equally powerful instinct, reason interrupts his career, and asks him whether he may not bring beings into the world, for whom he cannot provide the means of support. If he attend to this natural suggestion, the restriction too frequently produces vice. If he hear it not, the human race will be constantly endeavouring to increase beyond the means of subsistence. But as by that law of our nature which makes food necessary to the life of man, population can never actually increase beyond the lowest nourishment capable of supporting it; a strong check on population, from the difficulty of acquiring food, must be constantly in operation. This difficulty must fall somewhere; and must necessarily be severely felt in some or other of the various forms of misery, or the fear of misery, by a large portion of mankind.

That population has this constant tendency to increase beyond the means of subsistence, and that it is kept to its necessary level by these causes, will sufficiently appear from a review of the different states of society in which man has existed. But before we proceed to this review, the subject will perhaps be seen in a clearer light, if we endeavour to ascertain what would be the natural increase of population if left to exert itself with perfect freedom; and what might be expected to be the rate of increase in the productions of the earth, under the most favourable circumstances of human industry. A comparison of these two rates of increase will enable us to judge of the force of that tendency in population to increase beyond the means of subsistence, which has been stated to exist.

It will be allowed, that no country has hitherto been known, where the manners were so pure and simple, and the means of subsistence so

abundant, that no check whatever has existed to early marriages from the difficulty of providing for a family; and no waste of the human species has been occasioned afterwards by vicious customs, by towns, by unhealthy occupations, or too severe labour. Consequently in no state that we have yet known, has the power of population been left to exert itself with perfect freedom.

Whether the law of marriage be instituted or not, the dictate of nature and virtue seems to be an early attachment to one woman; and where there were no impediments of any kind in the way of a union to which such an attachment would lead, and no causes of depopulation afterwards, the increase of the human species would be evidently much greater than any increase which has been hitherto known.

In the northern states of America, where the means of subsistence have been more ample, the manners of the people more pure, and the checks to early marriages fewer, than in any of the modern states of Europe, the population was found to double itself, for some successive periods every twenty-five years. Yet, even during these periods, in some of the towns, the deaths exceeded the births; and they consequently required a continued supply from the country to support their population.

In the back settlements, where the sole employment is agriculture, and vicious customs and unwholesome occupations are little known, the population was found to double itself in fifteen years. Even this extraordinary rate of increase is probably short of the utmost power of population. Very severe labour is requisite to clear a fresh country; such situations are not in general considered as particularly healthy; and the inhabitants probably were occasionally subject to the incursions of the Indians, which might destroy some lives, or at any rate diminish the fruits of industry.

According to a table of Euler, calculated on a mortality of 1 in 36, if the births be to the deaths in the proportion of 3 to 1, the period of doubling will be only 12 4-5 years. And these proportions are not only possible suppositions, but have actually occurred for short periods in more countries than one.

Sir William Petty supposes a doubling possible in so short a time as ten years.

But to be perfectly sure that we are far within the truth, we will take the slowest of these rates of increase, a rate in which all concurring

testimonials agree, and which has been repeatedly ascertained to be from procreation only.

It may safely be pronounced therefore, that population, when unchecked, goes on doubling itself every twenty-five years, or increases in a geometrical ratio.

The rate according to which the productions of the earth may be supposed to increase, it will not be so easy to determine. Of this, however, we may be perfectly certain, that the ratio of their increase must be totally of a different nature from the ratio of the increase of population. A thousand millions are just as easily doubled every twenty-five years by the power of population as a thousand. But the food to support the increase from the greater number will by no means be obtained with the same facility. Man is necessarily confined in room. When acre has been added to acre till all the fertile land is occupied, the yearly increase of food must depend upon the melioration of the land already in possession. This is a stream, which, from the nature of all soils, instead of increasing, must be gradually diminishing. But population, could it be supplied with food, would go on with unexhausted vigour; and the increase of one period would furnish the power of a greater increase the next, and this, without any limit.

From the accounts we have of China and Japan, it may be fairly doubted, whether the best directed efforts of human industry could double the produce of these countries even once in any number of years. There are many parts of the globe, indeed, hitherto uncultivated and almost unoccupied; but the right of exterminating, or driving into a corner where they must starve, even the inhabitants of these thinly-peopled regions, will be questioned in a moral view. The process of improving their minds and directing their industry, would necessarily be slow; and during this time, as population would regularly keep pace with the increasing produce, it would rarely happen that a great degree of knowledge and industry would have to operate at once upon rich unappropriated soil. Even where this might take place, as it does sometimes in new colonies, a geometrical ratio increases with such extraordinary rapidity, that the advantage could not last long. If America continue increasing, which she certainly will do, though not with the same rapidity as formerly, the Indians will be driven further and further back into the country, till the whole race is ultimately exterminated.

These observations are, in a degree, applicable to all the parts of the earth where the soil is imperfectly cultivated. To exterminate the in-

habitants of the greatest part of Asia and Africa, is a thought that could not be admitted for a moment. To civilize and direct the industry of the various tribes of Tartars, and Negroes, would certainly be a work of considerable time, and of variable and uncertain success.

Europe is by no means so fully peopled as it might be. In Europe there is the fairest chance that human industry may receive its best direction. The science of agriculture has been much studied in England and Scotland; and there is still a great portion of uncultivated land in these countries. Let us consider at what rate the produce of this island might be supposed to increase under circumstances the most favourable to improvement.

If it be allowed that by the best possible policy, and great encouragements to agriculture, the average produce of the island could be doubled in the first twenty-five years, it will be allowing, probably, a greater increase than could with reason be expected.

In the next twenty-five years, it is impossible to suppose that the produce could be quadrupled. It would be contrary to all our knowledge of the properties of land. The improvement of the barren parts would be a work of time and labour; and it must be evident to those who have the slightest acquaintance with agricultural subjects, that in proportion as cultivation extended, the additions that could yearly be made to the former average produce, must be gradually and regularly diminishing. That we may be the better able to compare the increase of population and food, let us make a supposition, which, without pretending to accuracy, is clearly more favourable to the power of production in the earth, than any experience we have had of its qualities will warrant.

Let us suppose that the yearly additions which might be made to the former average produce, instead of decreasing, which they certainly would do, were to remain the same; and that the produce of this island might be increased every twenty-five years, by a quantity equal to what it at present produces: the most enthusiastic speculator cannot suppose a greater increase than this. In a few centuries it would make every acre of land in the island like a garden.

If this supposition be applied to the whole earth, and if it be allowed that the subsistence for man which the earth affords might be increased every twenty-five years by a quantity equal to what it at present produces, this will be supposing a rate of increase much greater

than we can imagine that any possible exertions of mankind could make it.

It may be fairly pronounced therefore, that, considering the present average state of the earth, the means of subsistence, under circumstances the most favourable to human industry, could not possibly be made to increase faster than in an arithmetical ratio.

The necessary effects of these two different rates of increase, when brought together, will be very striking. Let us call the population of this island eleven millions; and suppose the present produce equal to the easy support of such a number. In the first twenty-five years the population would be twenty-two millions, and the food being also doubled, the means of subsistence would be equal to this increase. In the next twenty-five years, the population would be forty-four millions, and the means of subsistence only equal to the support of thirty-three millions. In the next period the population would be eight-eight millions, and the means of subsistence just equal to the support of half that number. And, at the conclusion of the first century, the population would be a hundred and seventy-six millions, and the means of subsistence only equal to the support of fifty-five millions, leaving a population of a hundred and twenty-one millions totally unprovided for.

Taking the whole earth, instead of this island, emigration would of course be excluded; and, supposing the present population equal to a thousand millions, the human species would increase as the numbers, 1, 2, 4, 8, 16, 32, 64, 128, 256; and subsistence as 1, 2, 3, 4, 5, 6, 7, 8, 9. In two centuries the population would be to the means of subsistence as 256 to 9; in three centuries as 4096 to 13, and in two thousand years the difference would be almost incalculable.

In this supposition no limits whatever are placed to the produce of the earth. It may increase for ever, and be greater than any assignable quantity; yet still the power of population being in every period so much superior, the increase of the human species can only be kept down to the level of the means of subsistence by the constant operation of the strong law of necessity, acting as a check upon the greater power.

OF THE GENERAL CHECKS TO POPULATION, AND THE MODE OF THEIR OPERATION

The checks to population, which are constantly operating with more or less force in every society, and keep down the number to the level of the means of subsistence, may be classed under two general heads; the preventive and the positive checks.

The preventive check is peculiar to man, and arises from that distinctive superiority in his reasoning faculties which enables him to calculate distant consequences. Plants and animals have apparently no doubts about the future support of their offspring. The checks to their indefinite increase, therefore, are all positive. But man cannot look around him, and see distress which frequently presses upon those who have large families; he cannot contemplate his present possessions or earnings, which he now nearly consumes himself, and calculate the amount of each share, when with very little addition they must be divided, perhaps, among seven or eight, without feeling a doubt, whether if he follow the bent of his inclinations, he may be able to support the offspring which he will probably bring into the world. In a state of equality, if such can exist, this would be the simple question. In the present state of society other considerations occur. Will he not lower his rank in life, and be obliged to give up in great measure his former society? Does any mode of employment present itself by which he may reasonably hope to maintain a family? Will he not at any rate subject himself to greater difficulties, and more severe labour than in his single state? Will he not be unable to transmit to his children the same advantages of education and improvement that he had himself possessed? Does he even feel secure that, should he have a large family, his utmost exertions can save them from rags, and squalid poverty, and their consequent degradation in the community? And may he not be reduced to the grating necessity of forfeiting his independence, and of being obliged to the sparing hand of charity for support?

These considerations are calculated to prevent, and certainly do prevent, a great number of persons in all civilized nations from pursuing the dictate of nature in an early attachment to one woman.

If this restraint do not produce vice, as in many instances is the case, and very generally so among the middle and higher classes of men, it is undoubtedly the least evil that can arise from the principle of population. Considered as a restraint on an inclination, otherwise innocent, and always natural, it must be allowed to produce a certain degree of temporary unhappiness; but evidently slight, compared with the evils which result from any of the other checks to population.

When this restraint produces vice, as it does most frequently among men, and among a numerous class of females, the evils which follow are but too conspicuous. A promiscuous intercourse to such a degree as to prevent the birth of children, seems to lower in the most marked man-

ner the dignity of human nature. It cannot be without its effect on men, and nothing can be more obvious than its tendency to degrade the female character, and to destroy all its most amiable and distinguishing characteristics. Add to which, that among those unfortunate females with which all great towns abound, more real distress and aggravated misery are, perhaps, to be found, than in any other department of human life.

When a general corruption of morals, with regard to the sex, pervades all the classes of society, its effects must necessarily be, to poison the springs of domestic happiness, to weaken conjugal and parental affection, and to lessen the united exertions and ardour of parents in the care and education of their children; effects, which cannot take place without a decided diminution of the general happiness and virtue of society; particularly, as the necessity of art in the accomplishment and conduct of intrigues, and in the concealment of their consequences, necessarily leads to many other vices.

The positive checks to population are extremely various, and include every cause, whether arising from vice or misery, which in any degree contribute to shorten the natural duration of human life. Under this head therefore may be enumerated, all unwholesome occupations, severe labour and exposure to the seasons, extreme poverty, bad nursing of children, great towns, excesses of all kinds, the whole train of common diseases and epidemics, wars, pestilence, plague, and famine.

On examining these obstacles to the increase of population which are classed under the heads of preventive and positive checks, it will appear that they are all resolvable into moral restraint, vice, and misery.

Of the preventive checks, that which is not followed by irregular gratifications, may properly be termed moral restraint.

Promiscuous intercourse, unnatural passions, violations of the marriage bed, and improper arts to conceal the consequences of irregular connections, are preventive checks that clearly come under the head of vice.

Of the positive checks, those which appear to arise unavoidably from the laws of nature, may be called exclusively misery; and those which we obviously bring upon ourselves, such as wars, excesses, and many others which it would be in our power to avoid, are of a mixed nature. They are brought upon us by vice, and their consequences are misery.

In every country, some of these checks are, with more or less force,

in constant operation; yet, notwithstanding their general prevalence, there are few states in which there is not a constant effort in the population to increase beyond the means of subsistence. This constant effort as constantly tends to subject the lower classes of society to distress, and to prevent any great permanent melioration of their condition.

These effects, in the present state of society, seem to be produced in the following manner. We will suppose the means of subsistence in any country just equal to the easy support of its inhabitants. The constant effort towards population, which is found to act even in the most vicious societies, increases the number of people before the means of subsistence are increased. The food therefore which before supported eleven millions, must now be divided among eleven millions and a half. The poor consequently must live much worse, and many of them be reduced to severe distress. The number of labourers also being above the proportion of work in the market, the price of labour must tend to fall; while the price of provisions would at the same time tend to rise. The labourer therefore must do more work to earn the same as he did before. During this season of distress, the discouragements to marriage, and the difficulty of rearing a family are so great, that population is nearly at a stand. In the meantime, the cheapness of labour, the plenty of labourers, and the necessity of an increased industry among them, encourage cultivators to employ more labour upon their land; to turn up fresh soil, and to manure and improve more completely what is already in tillage; till ultimately the means of subsistence may become in the same proportion to the population as at the period from which we set out. The situation of the labourer being then again tolerably comfortable, the restraints to population are in some degree loosened; and, after a short period, the same retrograde and progressive movements, with respect to happiness, are repeated.

This sort of oscillation will not probably be obvious to common view; and it may be difficult even for the most attentive observer to calculate its periods. Yet that, in the generality of old states, some such vibration does exist, though in a much less marked, and in a much more irregular manner, than I have described it, no reflecting man who considers the subject deeply can well doubt.

One principal reason why this oscillation has been less remarked, and less decidedly confirmed by experience than might naturally be expected, is, that the histories of mankind which we possess, are, in general, histories only of the higher classes. We have not many ac-

counts, that can be depended upon, of the manners and customs of that part of mankind where these retrograde and progressive movements chiefly take place. A satisfactory history of this kind, of one people and of one period, would require the constant and minute attention of many observing minds in local and general remarks on the state of the lower classes of society, and the causes that influenced it; and, to draw accurate inferences upon this subject, a succession of such historians for some centuries would be necessary. This branch of statistical knowledge has, of late years, been attended to in some countries, and we may promise ourselves a clearer insight into the internal structure of human society from the progress of these inquiries. But the science may be said yet to be in its infancy, and many of the objects, on which it would be desirable to have information, have been either omitted or not stated with sufficent accuracy. Among these perhaps may be reckoned the proportion of the number of adults to the number of marriages; the extent to which vicious customs have prevailed in consequence of the restraints upon matrimony; the comparative mortality among the children of the most distressed part of the community, and of those who live rather more at their ease; the variations in the real price of labour; the observable differences in the state of the lower classes of society with respect to ease and happiness, at different times during a certain period; and very accurate registers of births, deaths, and marriages, which are of the utmost importance in this subject.

A faithful history, including such particulars, would tend greatly to elucidate the manner in which the constant check upon population acts; and would probably prove the existence of the retrograde and progressive movements that have been mentioned; though the times of their vibration must necessarily be rendered irregular from the operation of many interrupting causes; such as, the introduction or failure of certain manufactures; a greater or less prevalent spirit of agricultural enterprise; years of plenty, or years of scarcity; wars, sickly seasons, poor laws, emigration, and other causes of a similar nature.

A circumstance which has perhaps more than any other, contributed to conceal this oscillation from common view, is, the difference between the nominal and real price of labour. It very rarely happens that the nominal price of labour universally falls; but we well know that it frequently remains the same, while the nominal price of provisions has been gradually rising. This is, in effect, a real fall in the price of labour; and, during this period, the condition of the lower classes of

the community must be gradually growing worse. But the farmers and capitalists are growing rich from the real cheapness of labour. Their increasing capitals enable them to employ a greater number of men; and, as the population had probably suffered some check from the greater difficulty of supporting a family, the demand for labour, after a certain period, would be great in proportion to the supply, and its price would of course rise, if left to find its natural level; and thus the wages of labour, and consequently the condition of the lower classes of society, might have progressive and retrograde movements, though the price of labour might never nominally fall.

In savage life, where there is no regular price of labour, it is little to be doubted that similar oscillations take place. When population has increased nearly to the utmost limits of the food, all the preventive and the positive checks will naturally operate with increased force. Vicious habits with respect to the sex will be more general, the exposing of children more frequent, and both the probability and fatality, of wars and epidemics will be considerably greater; and these causes will probably continue their operation till the population is sunk below the level of the food; and then the return to comparative plenty will again produce an increase, and, after a certain period, its further progress will again be checked by the same causes.

But without attempting to establish in all cases these progressive and retrograde movements in different countries, which would evidently require more minute histories than we possess, the following propositions are proposed to be proved:

1. Population is necessarily limited by the means of subsistence.

2. Population invariably increases, where the means of subsistence increase, unless prevented by some very powerful and obvious checks.

3. These checks, and the checks which repress the superior power of population, and keep its effects on a level with the means of subsistence, are all resolvable into moral restraint, vice, and misery.

The first of these propositions scarcely needs illustration. The second and third will be sufficiently established by a review of the immediate checks to population in the past and present state of society.

This review will be the subject of the following chapters.

RICARDO

David Ricardo was born at London April 19, 1772. His father was a Dutch Jew, a member of the stock exchange. Young Ricardo entered a commercial school in Holland and at fourteen was given a place in his father's office.

In 1793 he had the courage to join the Episcopal church and marry Miss Wilkinson, a Gentile. This estranged him from his family and threw him on his own resources, but his ability or good luck was such that at twenty-five he was said to have already won riches on the exchange.

In 1799 he met with Adam Smith's *Wealth of Nations* and became greatly infatuated with political economy. In 1809 he published *The High Price of Bullion a Proof of the Depreciation of Bank Notes.* His *Principles of Political Economy and Taxation* was published in 1817. It was made famous by his theory of rent. This starts from the ideas of Malthus and argues that rent is equal to the difference in productiveness between any given land and the poorest land which the increase of population has forced into cultivation. If this principle is allowed he declares many propositions to follow, such as: that the increase of wages does not increase prices; that profits are increased only by a fall in wages and lessened only by a rise; that the profits depend upon the cost of the production of food raised at greatest expense.

In 1819 he entered Parliament and finally overcame his bashfulness enough to take a prominent part in economic questions. He died September 11, 1823.

THEORY OF RENT

It remains however to be considered, whether the appropriation of land, and the consequent creation of rent, will occasion any variation in the relative value of commodities, independently of the quantity of labour necessary to production. In order to understand this part of the

subject, we must enquire into the nature of rent, and the laws by which its rise or fall is regulated.

Rent is that portion of the produce of the earth which is paid to the landlord for the use of the original and indestructible powers of the soil. It is often, however, confounded with the interest and profit of capital, and, in popular language, the term is applied to whatever is annually paid by a farmer to his landlord. If, of two adjoining farms of the same extent, and of the same natural fertility, one had all the conveniences of farming buildings, and, besides, were properly drained and manured, and advantageously divided by hedges, fences and walls, while the other had none of these advantages, more remuneration would naturally be paid for the use of one, than for the use of the other; yet in both cases this remuneration would be called rent. But it is evident, that a portion only of the money annually to be paid for the improved farm, would be given for the original and indestructible powers of the soil; the other portion would be paid for the use of the capital which had been employed in ameliorating the quality of the land, and in erecting such buildings as were necessary to secure and preserve the produce. Adam Smith sometimes speaks of rent, in the strict sense to which I am desirous of confining it, but more often in the popular sense, in which the term is usually employed. He tells us, that the demand for timber, and its consequent high price, in the more southern countries of Europe, caused a rent to be paid for forests in Norway, which could before afford no rent. Is it not, however, evident, that the person who paid what he thus calls rent, paid it in consideration of the valuable commodity which was then standing on the land, and that he actually repaid himself with a profit, by the sale of the timber! If, indeed, after the timber was removed, any compensation were paid to the landlord for the use of the land, for the purpose of growing timber or any other produce, with a view to future demand, such compensation might justly be called rent, because it would be paid for the productive powers of the land; but in the case stated by Adam Smith, the compensation was paid for the liberty of removing and selling the timber, and not for the liberty of growing it. He speaks also of the rent of coal mines, and of stone quarries, to which the same observation applies—that the compensation given for the mine or quarry, is paid for the value of the coal or stone which can be removed from them, and has no connexion with the original and indestructible powers of the land. This is a distinction of great importance, in an enquiry concerning rent and profits; for it is found, that the laws which

regulate the progress of rent, are widely different from those which regulate the progress of profits, and seldom operate in the same direction. In all improved countries, that which is annually paid to the landlord, partaking of both characters, rent and profit, is sometimes kept stationary by the effects of opposing causes; at other times advances or recedes, as one or the other of these causes preponderates. In the future pages of this work, then, whenever I speak of the rent of land, I wish to be understood as speaking of that compensation which is paid to the owner of land for the use of its original and indestructible powers.

On the first settling of a country, in which there is an abundance of rich and fertile land, a very small proportion of which is required to be cultivated for the support of the actual population, or indeed can be cultivated with the capital which the population can command, there will be no rent; for no one would pay for the use of land, when there was an abundant quantity not yet appropriated, and, therefore, at the disposal of whosoever might choose to cultivate it.

On the common principles of supply and demand, no rent could be paid for such land, for the reason stated why nothing is given for the use of air and water, or for any other of the gifts of nature which exist in boundless quantity. With a given quantity of materials, and with the assistance of the pressure of the atmosphere, and the elasticity of steam, engines may perform work, and abridge human labour to a very great extent; but no charge is made for the use of these natural aids, because they are inexhaustible, and at every man's disposal. In the same manner, the brewer, the distiller, the dyer, make incessant use of the air and water for the production of their commodities; but as the supply is boundless, they bear no price. If all land had the same properties, if it were unlimited in quantity, and uniform in quality, no charge could be made for its use, unless where it possessed peculiar advantages of situation. It is only, then, because land is not unlimited in quantity and uniform in quality, and because, in the progress of population, land of an inferior quality, or less advantageously situated, is called into cultivation, that rent is ever paid for the use of it. When, in the progress of society, land of the second degree of fertility is taken into cultivation, rent immediately commences on that of the first quality, and the amount of that rent will depend on the difference in the quality of these two portions of land.

When land of the third quality is taken into cultivation, rent im-

mediately commences on the second, and it is regulated as before, by the difference in their productive powers. At the same time, the rent of the first quality will rise, for that must always be above the rent of the second, by the difference between the produce which they yield with a given quantity of capital and labour. With every step in the progress of population, which shall oblige a country to have recourse to land of a worse quality, to enable it to raise its supply of food, rent, on all the more fertile land, will rise.

Thus suppose land—No. 1, 2, 3,—to yield, with an equal employment of capital and labour, a net produce of 100, 90, and 80 quarters of corn. In a new country, where there is an abundance of fertile land compared with the population, and where therefore it is only necessary to cultivate No. 1, the whole net produce will belong to the cultivator, and will be the profits of the stock which he advances. As soon as population had so far increased as to make it necessary to cultivate No. 2, from which ninety quarters only can be obtained after supporting the labourers, rent would commence on No. 1; for either there must be two rates of profit on agricultural capital, or ten quarters, or the value of ten quarters must be withdrawn from the produce of No. 1, for some other purpose. Whether the proprietor of the land or any other person, cultivated No. 1, these ten quarters would equally constitute rent; for the cultivator of No. 2 would get the same result with his capital, whether he cultivated No. 1, paying ten quarters for rent, or continued to cultivate No. 2, paying no rent. In the same manner it might be shown that when No. 3 is brought into cultivation, the rent of No. 2 must be ten quarters, or the value of ten quarters, whilst the rent of No. 1 would rise to twenty quarters; for the cultivator of No. 3 would have the same profits whether he paid twenty quarters for the rent of No. 1, ten quarters for the rent of No. 2, or cultivated No. 3 free of all rent.

It often, and, indeed, commonly happens, that before No. 2, 3, 4, or 5, or the inferior lands are cultivated, capital can be employed more productively on those lands which are already in cultivation. It may perhaps be found that, by doubling the original capital employed on No. 1, though the produce will not be doubled, will not be increased by 100 quarters, it may be increased by eighty-five quarters, and that this quantity exceeds what could be obtained by employing the same capital on land No. 3.

In such case, capital will be preferably employed on the old land, and will equally create a rent; for rent is always the difference between

the produce obtained by the employment of two equal quantities of capital and labour. If, with a capital of 1,000*l.* a tenant obtain 100 quarters of wheat from his lands, and by the employment of a second capital of 1,000*l.*, he obtain a further return of eighty-five, his landlord would have the power, at the expiration of his lease, of obliging him to pay fifteen quarters, or an equivalent value for additional rent; for there cannot be two rates of profit. If he is satisfied with a diminution of fifteen quarters in the return for his second 1,000*l.*, it is because no employment more profitable can be found for it. The common rate of profit would be in that proportion, and if the original tenant refused, some other person would be found willing to give all which exceeded that rate of profit to the owner of the land from which he derived it.

In this case, as well as in the other, the capital last employed pays no rent. For the greater productive powers of the first 1,000*l.*, fifteen quarters is paid for rent, for the employment of the second 1,000*l.*, no rent whatever is paid. If a third 1,000*l.* be employed on the same land, with a return of seventy-five quarters, rent will then be paid for the second 1,000*l.*, and will be equal to the difference between the produce of these two, or ten quarters; and at the same time the rent of the first 1,000*l.* will rise from fifteen to twenty-five quarters; while the last 1,000*l.* will pay no rent whatever.

If, then, good land existed in a quantity much more abundant than the production of food for an increasing population required, or if capital could be indefinitely employed without a diminished return on the old land, there could be no rise of rent; for rent invariably proceeds from the employment of an additional quantity of labour with a proportionately less return.

The most fertile and most favourably situated land will be first cultivated, and the exchangeable value of its produce will be adjusted in the same manner as the exchangeable value of all other commodities, by the total quantity of labour necessary in various forms, from first to last, to produce it and bring it to market. When land of an inferior quality is taken into cultivation, the exchangeable value of raw produce will rise, because more labour is required to produce it.

The exchangeable value of all commodities, whether they be manufactured, or the produce of the mines, or the produce of land, is always regulated, not by the less quantity of labour that will suffice for their production under circumstances highly favourable, and exclusively enjoyed by those who have peculiar facilities of production; but by the

greater quantity of labour necessarily bestowed on their production by those who have no such facilities; by those who continue to produce them under the most unfavourable circumstances; meaning—by the most unfavourable circumstances, the most unfavourable under which the quantity of produce required, renders it necessary to carry on the production.

Thus, in a charitable institution, where the poor are set to work with the funds of benefactors, the general prices of the commodities, which are the produce of such work, will not be governed by the peculiar facilities afforded to these workmen, but by the common, usual, and natural difficulties, which every other manufacturer will have to encounter. The manufacturer enjoying none of these facilities might indeed be driven altogether from the market, if the supply afforded by these favoured workmen were equal to all the wants of the community; but if he continued the trade, it would only be on condition that he should derive from it the usual and general rate of profits on stock; and that could only happen when his commodity sold for a price proportioned to the quantity of labour bestowed on its production.

It is true, that on the best land the same produce would still be obtained with the same labour as before, but its value would be enhanced in consequence of the diminished returns obtained by those who employed fresh labour and stock on the less fertile land. Notwithstanding, then, that the advantages of fertile over inferior lands are in no case lost, but only transferred from the cultivator, or consumer, to the landlord, yet, since more labour is required on the inferior lands, and since it is from such land only that we are enabled to furnish ourselves with the additional supply of raw produce, the comparative value of that produce will continue above its former level, and make it exchange for more hats, cloth, shoes, etc., etc., in the production of which no such additional quantity of labour is required.

The reason, then, why raw produce rises in comparative value, is because more labour is employed in the production of the last portion obtained, and not because a rent is paid to the landlord. The value of corn is regulated by the quantity of labour bestowed on its production on that quality of land, or with that portion of capital, which pays no rent. Corn is not high because a rent is paid, but a rent is paid because corn is high; and it has been justly observed that no reduction would take place in the price of corn, although landlords should forego the whole of their rent. Such a measure would only enable some farmers

Long Beach 4, Calif.

to live like gentlemen, but would not diminish the quantity of labour necessary to raise raw produce on the least productive land in cultivation.

Nothing is more common than to hear of the advantages which the land possesses over every other source of useful produce, on account of the surplus which it yields in the form of rent. Yet when land is most abundant, when most productive, and most fertile, it yields no rent; and it is only when its powers decay, and less is yielded in return for labour, that a share of the original produce of the more fertile portions is set apart for rent. It is singular that this quality in the land, which should have been noticed as an imperfection, compared with the natural agents by which manufacturers are assisted, should have been pointed out as constituting its peculiar pre-eminence. If air, water, the elasticity of steam, and the pressure of the atmosphere, were of various qualities; if they could be appropriated, and each quality existed only in moderate abundance, they, as well as the land, would afford a rent, as the successive qualities were brought into use. With every worse quality employed, the value of the commodities in the manufacture of which they were used, would rise, because equal quantities of labour would be less productive. Man would do more by the sweat of his brow, and nature perform less; and the land would be no longer pre-eminent for its limited powers.

If the surplus produce which land affords in the form of rent be an advantage, it is desirable that, every year, the machinery newly constructed should be less efficient than the old, as that would undoubtedly give a greater exchangeable value to the goods manufactured, not only by that machinery, but by all the other machinery in the kingdom; and a rent would be paid to all those who possessed the most productive machinery.

The rise of rent is always the effect of the increasing wealth of the country, and of the difficulty of providing food for its augmented population. It is a symptom, but it is never a cause of wealth; for wealth often increases most rapidly while rent is either stationary, or even falling. Rent increases most rapidly, as the disposable land decreases in its productive powers. Wealth increases most rapidly in those countries where the disposable land is most fertile, where importation is least restricted, and where, through agricultural improvements, productions can be multiplied without any increase in the proportional quantity of labour, and where consequently the progress of rent is slow.

If the high price of corn were the effect, and not the cause of rent, price would be proportionately influenced as rents were high or low, and rent would be a component part of price. But that corn which is produced by the greatest quantity of labour is the regulator of the price of corn; and rent does not and cannot enter in the least degree as a component part of its price. Adam Smith, therefore, cannot be correct in supposing that the original rule which regulated the exchangeable value of commodities, namely, the comparative quantity of labour by which they were produced, can be at all altered by the appropriation of land and the payment of rent. Raw material enters into the composition of most commodities, but the value of that raw material, as well as corn, is regulated by the productiveness of the portion of capital last employed on the land, and paying no rent; and therefore rent is not a component part of the price of commodities.

We have been hitherto considering the effects of the natural progress of wealth and population on rent, in a country in which the land is of variously productive powers; and we have seen that with every portion of additional capital which it becomes necessary to employ on the land with a less productive return, rent would rise. It follows from the same principles, that any circumstances in the society which should make it unnecessary to employ the same amount of capital on the land, and which should therefore make the portion last employed more productive, would lower rent. Any great reduction in the capital of a country, which should materially diminish the funds destined for the maintenance of labour, would naturally have this effect. Population regulates itself by the funds which are to employ it, and therefore always increases or diminishes with the increase or diminution of capital. Every reduction of capital is therefore necessarily followed by a less effective demand for corn, by a fall of price, and by diminished cultivation. In the reverse order to that which the accumulation of capital raises rent, will the diminution of it lower rent. Land of a less unproductive quality will be in succession relinquished, the exchangeable value of produce will fall, and land of a superior quality will be the land last cultivated, and that which will then pay no rent.

The same effects may, however, be produced, when the wealth and population of a country are increased, if that increase is accompanied by such marked improvements in agriculture, as shall have the same effect of diminishing the necessity of cultivating the poorer lands, or of expending the same amount of capital on the cultivation of the more fertile portions.

If a million of quarters of corn be necessary for the support of a given population, and it be raised on land of the qualities of No. 1, 2, 3; and if an improvement be afterwards discovered by which it can be raised on No. 1 and 2, without employing No. 3, it is evident that the immediate effect must be a fall of rent; for No. 2, instead of No. 3, will then be cultivated without paying any rent; and the rent of No. 1, instead of being the difference between the produce of No. 3 and No. 1, will be the difference only between No. 2 and 1. With the same population, and no more, there can be no demand for any additional quantity of corn; the capital and labour employed on No. 3 will be devoted to the production of other commodities desirable to the community, and can have no effect in raising rent, unless the raw material from which they are made cannot be obtained without employing capital less advantageously on the land, in which case No. 3 must again be cultivated.

It is undoubtedly true, that the fall in the relative price of raw produce, in consequence of the improvement in agriculture, or rather in consequence of less labour being bestowed on its production, would naturally lead to increased accumulation; for the profits of stock would be greatly augmented. This accumulation would lead to an increased demand for labour, to higher wages, to an increased population, to a further demand for raw produce, and to an increased cultivation. It is only, however, after the increase in the population, that rent would be as high as before; that is to say, after No. 3 was taken into cultivation. A considerable period would have elapsed, attended with a positive diminution of rent.

But improvements in agriculture are of two kinds: those which increase the productive powers of the land, and those which enable us, by improving our machinery, to obtain its produce with less labour. They both lead to a fall in the price of raw produce; they both affect rent, but they do not affect it equally. If they did not occasion a fall in the price of raw produce, they would not be improvements; for it is the essential quality of an improvement to diminish the quantity of labour before required to produce a commodity; and this diminution cannot take place without a fall of its price or relative value.

The improvements which increased the productive powers of the land, are such as the more skilful rotation of crops, or the better choice of manure. These improvements absolutely enable us to obtain the same produce from a smaller quantity of land. If, by the introduction of a course of turnips, I can feed my sheep besides raising my corn, the land

PHILOSOPHY

KANT, as we have seen in an earlier volume, left a deep-cut contrast between phenomena and noumena, that is, between nature or things in themselves and our world of experience. Space, time, cause and effect, and all the categories, said he, are only mental forms; all experience, it is true, must come under and be subject to them in order to enter our experience at all: but things in themselves we do not experience, and nature itself, God, and our own souls are not subject to these laws and are thus free.

The great characteristic of the philosophy that succeeded Kant was its effort to find a principle higher than these contrasted worlds, one that would reconcile them and reduce Kant's absolute distinction between them to the relative distinction between merely two aspects of the same truth.

First, however, came a period of criticism:

If cause and effect is *merely* a mental form to be applied only to experience, what right have we so to use it as to presuppose things-in-themselves at all, since they are outside of experience? This was in effect the question asked by Jacobi (1743-1819) and Fichte.

Salmon Maimon (1756-1800) made the point that since Kant's mental forms were discovered by experience, we can never be sure that the list is complete.

The first attempt to reduce Kant's dualism between nature and phenomena, and between the subject and object to a unity was made by Fichte (1762-1814). Fichte practically sweeps nature existing as a thing-in-itself, and the object existing as distinct from the subject, out

of existence. His principle above all is the "Ego," the self. Subject and object, knowledge and will, are all activities of the self. The Ego exists only in its activities (cf. Aristotle's "Idea"), but all things are but phases of its own activity (cf. Brahmanism), even the part of consciousness it distinguishes from itself is so distinguished by its own activity. His "Ground of the Whole Theory of Science" is an attempt to conceive of our world of consciousness as the development of such an Ego.

Schelling was a disciple of Fichte, but he began at an early age to apply Fichte's point of view to the world of nature. Fichte had tried to account for the facts of consciousness as the development of the Ego. Schelling tried to account for all nature as the development of unconscious nature toward spirit. When Schelling began to think of subject and object—all things, in fact—as developed from an indeterminate, neutral nature, as the poles from the indifferent point of a magnet, Hegel (1770-1831), who had worked with him thus far, broke away and traced a conception of the world as the development of spirit. Hegel forced modern times to rewrite the history of philosophy, aesthetics, and civilization. Curiously enough, his ideas led to conservatism in politics and social science, because if the universe is the development of spirit, is not each stage a necessary one?

Schopenhauer (1788-1860) fought with a pen dipped in the scorn of pessimism against the extravagances of the idealistic philosophy and argued to substitute in place of Kant's thing-in-itself, the idea of the Will in nature.

The philosophy of Comte (1798-1857) was a still further reaction against the idealistic philosophy, and in fact against the philosophical state of mind altogether. Comte believed that the first stage in thought is theological, the second philosophical, and the last scientific, or "positive." He believed in the reign of positive law, not only in the natural sciences, but in the field of civilization, and began the development of a new science of society.

The stream of philosophy at the beginning of the second third of the century had turned toward materialism and was soon to be well-nigh absorbed in the question of evolution.

FICHTE

JOHANNE GOTTLIEB FICHTE was born in Upper Lusatia, Germany, May 19, 1762. He was educated in the lower schools under the patronage of Baron von Miltitz. Later he studied theology at Jena and Leipzig, supporting himself mostly by private tutoring (1780 to 1787). In 1790 his *Critique of All Revelation* was published, and as his name and preface had been accidentally omitted it was at once ascribed to Kant. When Kant corrected the mistake, but praised the work, Fichte's reputation was made. In 1793 Fichte succeeded Reinhold at Jena and was immediately successful.

He took much interest in politics and attempted to justify the French Revolution (1793). In 1794 he completed his *Science of Knowledge,* in which he attempted to demonstrate Kant's system of philosophy by an analysis of consciousness. He tried to unfold from his conception of the Ego the *a priori* conditions of all knowledge. He was attacked in 1798 for speaking of the moral order of the world as equivalent to the idea of God, and about the same time Kant declared that the *Science of Knowledge* was not an exposition of the Kantian system. Fichte was forced to take refuge in Berlin. In 1808 he told his pupils that it was time for action, not for philosophy, and led them in the uprising of Germany against Napoleon. His *Addresses to the German Nation* at this time had an immense effect in arousing Germany. He died of a hospital fever January 27, 1814.

In philosophy Fichte starts from the system of Kant that we can know only phenomena, that the laws of phenomena are furnished by the mind (cause and effect, etc.), that things in themselves may be free from these laws, that the soul is a thing in itself, and hence cannot be known, and in regard to its will may be free. Fichte refuses to see how, if cause and effect is merely a mental form, this category would make us suspect the existence of things in themselves that are not mental, and at once takes the high ground that all experience is the product of consciousness itself—that the Ego finds its experience in reflecting on its own acts. His *Science of Knowledge* is an attempt to conceive of the

universe as a system of one's own reason. The outline given below was drawn up by him for the use of his students.

OUTLINES OF THE DOCTRINE OF KNOWLEDGE

I.

The Doctrine of Knowledge, apart from all special and definite knowing, proceeds immediately upon Knowledge itself, in the essential unity in which it recognizes Knowledge as existing; and it raises this question in the first place: How this Knowledge can come into being, and what it is in its inward and essential Nature?

The following must be apparent: There is but One who exists absolutely by and through himself,—namely, God; and God is not the mere dead conception to which we have thus given utterance, but he is in himself pure Life. He can neither change nor determine himself in aught within himself, nor become any other Being; for his Being contains within it all his Being and all possible Being, and neither within him nor out of him can any new Being arise.

If, therefore, Knowledge must be, and yet be not God himself, then, since there is nothing but God, it can only be God out of himself,—God's Being out of his Being,—his Manifestation, in which he dwells wholly as he is in himself, while within himself he also still remains wholly such as he is. But such a Manifestation is a picture or *Schema.*

If there be such a Manifestation—and this can only become evident through its immediate being, seeing that it is immediate—it can only be because God is; and, so surely as God is, it cannot but be. It is, however, by no means to be conceived of as a work of God, effected by some particular act, whereby a change is wrought in himself; but it is to be conceived of as an immediate consequence of his Being. It is absolutely, according to the Form of his Being, just as he himself is absolutely; although it is not he himself, but his Manifestation.

Again:—Out of God there can be nothing whatever but this;—no Being that is essentially independent, for that he alone is;—only his Manifestation can there be out of him, and thus a Being out of God signifies merely his Manifestation;—the two expressions mean precisely the same thing.

II.

Further:—Since it cannot be overlooked by the Doctrine of Knowl-

edge that Actual Knowledge does by no means present itself as a Unity, such as is assumed above, but as a Multiplicity, there is consequently a second task imposed upon it,—that of setting forth the ground of this apparent Multiplicity. It is of course understood that this ground is not to be derived from any outward source, but must be shown to be contained in the essential Nature of Knowledge itself as such;—and that therefore this problem, although apparently two-fold, is yet but one and the same,—namely, to set forth the essential Nature of Knowledge.

III.

This Being out of God cannot, by any means, be a limited, completed, and inert Being, since God himself is not such a dead Being, but, on the contrary, is Life;—but it can only be a Power, since only a Power is the true formal picture or Manifestation of Life. And indeed it can only be the Power of realizing that which is contained in itself—a Manifestation. Since this Power is the expression of a determinate Being—the Manifestation of the Divine Life—it is itself determined; but only in the way in which an absolute Power may be determined,—by laws, and indeed by determinate laws. If this or that is to become actual, the Power must operate in this way or that, subject to that determination.

IV.

Thus in the first place:—There can be an actual Being out of God only through the self-realization of this absolute Power:—this Power, however, can only produce pictures or Manifestations, which by combination become Actual Knowledge. Thus, whatever exists out of God, exists only by means of absolutely free Power, as the Knowledge belonging to this Power, and in its Knowledge;—and any other Being but this out of the true Being which lies hidden in God is altogether impossible.

V.

Again, as to the determination of this Power by laws:—It is, in the first place, determined through itself, as the Power of Actual Knowledge. But it is essential to Actual Knowledge that some particular Manifestation should be realized through this Power; and then that through the same identical Power, in the same identical position, this Manifestation should be recognized as a Manifestation, and as a Manifestation not in itself independent, but demanding, as a condition of its existence, a Being out of itself. The immediate and concrete expression of this recognition,—which in Actual Knowledge never attains to consciousness, but which is elevated into consciousness only by means of the Doctrine of Knowledge,—is Actual Knowledge itself in its Form;

and, in consequence of this latter recognition, there is, of necessity, assumed an Objective Reality, wholly transcending the Manifestation and independent of Knowledge. Since in this Knowledge of the Objective Reality, even the Manifestation itself is concealed, much more is the Power which creates it concealed and unseen. This is the fundamental law of the Form of Knowledge. So surely therefore as the Power develops itself in this particular way, it develops itself as we have described; not merely Manifesting, but also manifesting the Manifestation as a Manifestation, and recognizing it in its dependent nature; —not that it must unconditionally do this, but that only by means of this process can it attain to Actual Knowledge

In consequence of this there is much that remains invisible in Actual Knowledge, but which, nevertheless, really is as the manifestation of this Power. If therefore this, and all other manifestation of this Power, were to be imported into Knowledge, then could this only occur in a Knowledge other than that first mentioned; and thus would the unity of Knowledge necessarily be broken up into separate parts, by the opposition of the law of the form of visibility to that law by which Knowledge perceives itself as a perfect and indivisible whole.

VI.

Further:—Within this its Formal Being, this Power is also determined by an unconditional Imperative. It shall recognize itself as the Manifestation of the Divine Life, which it is originally, and through which alone it has Existence;—consequently this is its absolute vocation, in which its efficiency as a Power is completely exhausted. It shall recognize itself as the Manifestation of the Divine Life,—but it is originally nothing more than a Power, although most assuredly it is this determinate Power of the Manifestation of God:—if it is to recognize itself as such a Manifestation in Reality, then it must make itself so actually by the realization of the Power—by its self-realization.

VII.

The recognition of itself as a Power to which an unconditional Imperative is addressed, and which is able to fulfill that Imperative, and the actual realization of this Power, should the latter come to pass, are distinct from each other; and the possibility of the latter is dependent on the previous accomplishment of the former.

It shall recognize itself as the Divine Manifestation, not by means of any Being inherent in itself, for there is no such Being, but by means of the realization of the Power. It must therefore previously possess

the knowledge that it is such a Power, and also by what marks it may recognize itself in its self-realization, in order that it may direct its attention to these characteristic marks, and so be enabled to judge of the realization which they denote.

Or it may be regarded thus:—By means of the realization of the Power there arises a Manifestation, and a consciousness of that which is contained in the Manifestation, and not more than this. (§ V.) The formal addition, which lies beyond the immediate contents of the Manifestation,—*i. e.*, that it is the Manifestation of God,—is not immediately contained in it; and can only be attributed to it in consequence of some characteristic mark perceived in the actual realization of the Power. The characteristic mark is this:—that the Power realize itself, with absolute Freedom, in accordance with the recognized universal Imperative.

VIII.

If it shall recognize itself as a Power to which an unconditional Imperative is addressed, it must, previous to this definite recognition, have also recognized itself generally as a Principle;—and since it can only recognize itself by means of its own self-development, it must necessarily develop itself before being able to recognize itself immediately as the Principle in this development. The necessity for this is contained in the intention that the Imperative shall become visible to it; and it may therefore be named a necessity of the Imperative—a shall of the shall—namely, a necessity of its visibility:—consequently this Imperative—this shall—lies in the primitive determination of the Power through its Being from God. Since, when it does not recognize itself generally as a Principle, it cannot, in the same position and at the same time, recognize itself in any more definite form, it is clear that these two modes of Knowledge are separate and distinct from each other. We call Knowledge by means of an immediate invisible principle—Intuition.

IX.

Since neither the Power itself as such, nor the Divine Life, is Manifested in Intuition, by which indeed there is first introduced the practical possibility of such Manifesting, it is clear that there is nothing left remaining in Intuition but the mere Form of Power as given in its immediate expression. It is (§ V.) a Power of Contemplation,—and that indeed without direction towards the one Divine Life, which from this standing-point remains concealed;—an undefined, wholly indeterminate, and yet absolute Power,—and hence an Infinite. It therefore

manifests itself as contemplating an infinity in one glance:—Space; it consequently thus also manifests itself as contracting and limiting itself, in the same undivided Intuition, to a point in that first infinity, a point which in itself is likewise infinitely divisible, a consolidated infinite space within the other simple infinite Space,—or Matter;—thus as an infinite Power of self-concentration, and consequently also as an unlimited Material World in Space:—all which, according to the fundamental law of Knowledge which we have already adduced (§V.) must appear to it as actual, self-existent Being.

Further:—By virtue of its merely formal power of Being, it is an absolutely primitive Principle. In order to manifest itself as such in Intuition, it must, antecedent to its actual activity, perceive a possible form of activity which—thus it must seem to it—it either might or might not be able to realize. This possible form of activity cannot be perceived by it in the Absolute Imperative, which to this point of view is invisible; hence it can only be perceived in a likewise blindly manifested Causality, which indeed is not an immediate Causality, but only appears to become so through the apparent realization of the Power. But such a Causality is an Instinct. It was necessary that the Power should feel itself impelled to this or that form of activity, but without the source of the impulse being immediately perceived, since such an immediate recognition would deprive it of the appearance of Freedom, which is here an indispensable characteristic.

This activity demanded by Instinct can only be an activity exercised on the Material World. Hence the Instinct to activity comes into view in immediate relation to material existences; these are consequently recognized in this immediate relation, and acquire, through this relation, not merely extension in Space, but, even more, their internal qualities:—and by this remark we have completed the definition of material existences, which was before left incomplete.

Should the Power, by means of this Instinct and the consequent appearance of self-determination, perceive itself as in a state of real activity, then, in the perception of this activity, it would be associated with the Material World in the same undivided Form of Intuition; and hence in this Intuition, thus uniting it with the Material World, it would perceive itself as a material existence in a double relation to the Material World:—partly as Sense, that it might feel the relation of that world to its Instinct,—partly as Organism, that it might contemplate its own activity therein.

In this activity it now beholds itself as the same identical Power in a state of self-determination; but as not exhausted in any form of its activity, and as thus remaining a Power *ad infinitum*. In this perception of its unlimited Power there arises before it an Infinity; not in one glance, like that first mentioned, but an Infinity in which it may behold its own infinite activity;—an infinite series of successive links:—Time. Since this activity can be exercised *ad infinitum* only on the Material World, Time is likewise transferred to that world in the unity of Intuition, although that world already possesses its own peculiar expression of Infinitude in the infinite divisibility of Space and of all its parts.

It is obvious that the position in which the Power gives itself up wholly to the contemplation of the Material World and is exhausted therein, is distinct from that in which it becomes cognizant of its Instinct towards activity in this previously recognized World;—that nevertheless there remains, even in the latter position, a Manifestation of present and necessary Existence, in order that it may be possible for the Instinct to enter into relations with such Existence:—and this forms the connection between these two separate and distinct positions of Intuition.

This whole domain of Intuition is, as we have said, the expression and Manifestation of mere Power. Since Power, without the Manifestation of the Divine Life, is nothing, while here it is nevertheless Manifested in this its nothingness,—this whole domain is consequently nothing in itself, and only in its relation to Actual Being does it acquire significance, the practical possibility of the latter being dependent upon it.

X.

There is further contained in the Power an original determination to raise itself to the perception of the Imperative, the practical realization of which is now rendered immediately possible by the recognized Existence of the whole domain of Intuition. But how and in what way can this elevation be accomplished? That which abides firmly in Intuition, and is indeed the very root of it, is Instinct;—by its means the Power itself is made dependent on Intuition, and is imprisoned within it. The condition and the only means for the now possible realization of the Power, is therefore the liberation of itself from Instinct, and the abolition of the latter as the invisible and blind impulse of Manifesting;—and in the abolition of the principle, the consequence of it—imprisonment in Intuition—is likewise abolished. Knowledge would then stand

forth in its primitive unity, as it is perceived at first by the Doctrine of Knowledge;—in this its essential unity it would manifest itself as dependent, and as requiring a *substratum*—a unity which shall exist absolutely through itself. Knowledge in this form is no longer Intuition, but Thought;—and indeed Pure Thought, or Intelligizing.

XI.

Before proceeding further, we must from this central point indicate a distinction hitherto unnoticed in the sphere of Intuition. Only through blind Instinct, in which the only possible guidance of the Imperative is awanting, does the Power in Intuition remain undetermined; where it is manifested as absolute it becomes infinite; and where it is presented in a determinate form, as a principle, it becomes at least manifold. By the above mentioned act of Intelligizing, the Power liberates itself from Instinct, to direct itself towards Unity. But so surely as it requires a special act for the production of this Unity,—(in the first place indeed inwardly and immediately within the Power itself, because only under this condition could it be outwardly perceived in the Manifestation),—so surely was the Power not viewed as One in the sphere of Intuition, but as Manifold;—this Power, which now through perception and recognition of itself has become an Ego—an Individual,—was, in this sphere, not one Individual, but necessarily broken up into a world of individuals.

This indeed does not occur in the Form of Intuition itself. The original Manifesting principle, and the principle which recognizes this Manifestation immediately and in the very act of its production as a Manifestation, are of necessity numerically one, not two; and thus also, in the domain of Intuition, that which immediately contemplates its Intuition is a single, self-inclosed, separate principle, in this respect inaccessible to any other:—the individuality of all men, who, on this account, can each have but one separate individuality. But this separation of individuals must certainly take place in that Form in which alone unity also is produced,—namely, in that of Thought;—hence the individuality we have described, however isolated it may appear in the immediate Intuition of itself, yet, when it comprehends itself in Thought, perceives itself, in this Thought, as an Individual in a world of Individuals like itself; which latter, since it cannot behold them as free principles like itself in immediate Intuition, can only be recognized by it as such, by an inference from the mode of their activity in the World of Sense.

From this farther definition of the sphere of Intuition—that in it the Principle, which through its Being in God is One, is broken up into Many—there follows yet another. This division, even in the One Thought, and the mutual recognition, which nevertheless is necessarily found in connection with it, would not be possible were not the Object of the Intuition and of the Activity of all, one and the same,—a like World to them all. The Intuition of a World of Sense existed only in order that through this World the Ego might become visible to itself as standing under the Law of an Absolute Imperative. For this nothing more was necessary than that the Intuition of such a World should simply exist;—the manner of its being is absolutely of no importance, since for this purpose any form of it is sufficient. But the Ego must besides recognize itself as One in a given Multiplicity of Individuals;—and to this end it is necessary, besides the general determinations of the World of Sense already mentioned, that this World should be the same to each beholder:—the same Space, and the same filling up of it for all;—notwithstanding that it is still left to individual Freedom to apprehend this common filling up in its own particular order in Time:—the same Time, and the same filling up of it by sensible events for all;—notwithstanding that it still remains free to everyone, so far as his own thought and action are concerned, to fill it up after his own fashion. The necessity for the Imperative becoming visible (§VIII.) as it proceeds from God, is assuredly contained in the One Principle, since there is but One Principle that proceeds from God; and thus, in consequence of the unity of the Power, it is possible for each Individual to picture his World of Sense in accordance with the law of that original harmony;—and every Individual, under the condition of being found on the way towards the recognition of the Imperative, must so manifest it. I might say:—Every Individual can and must, under the given condition, construct the True World of Sense;—for this indeed has, beyond the universal and formal laws above deduced, no other Truth and Reality than this universal harmony.

XII.

Let us return to Pure Thought or Intelligizing (§X). By it Knowledge is perceived as its only possible Manifestation of the Divine Life. In this Thought I do not possess Knowledge immediately, but only in a Manifestation; still less do I possess in it the Divine Life immediately, but only in a Manifestation of the Manifestation,—in a doubly ineffectual conception. I reflect,—and a power of so reflecting

must, for the reason to be given presently, be contained in the general Power,—I reflect that I perceive this Knowledge; that therefore I can perceive it; that since, according to the insight thus obtained, Knowledge is the expression of God, this Power itself is likewise his expression; that the Power exists only that it may be realized; and that consequently, in virtue of my Being from God, I shall perceive it. Only by means of this reflection do I arrive at the insight that I shall, absolutely:—but I shall, besides, attain this insight;—hence,—this must surely be now apparent—there must, likewise in virtue of my Being from God, be an absolute Power of this reflection contained in the general Power. The whole sphere which we have now described thus reveals itself as an Imperative of perception:—that I,—the Principle already perceived in the sphere of Intuition,—that I shall. In it, the Ego, which through mere reflection is immediately visible as a Principle, becomes the Principle of the Manifestation,—as is apparent in the insight of Knowledge in its unity, and of the Divine Life as its *substratum,* which we have already adduced;—to which I may now add, by virtue of this immediate reflection:—I think this,—I produce this insight. This Knowledge, by means of a Principle which is immediately visible as a Principle, is Pure Thought, as we said;—in contradistinction to that by means of an immediate invisible Principle—Intuition.

These two, Pure Thought and Intuition, are thus distinguished from each other in this,—that the latter, even in its very principle, is abolished and annihilated by the former. Their connection, on the other hand, consists in this,—that the latter is a condition of the practical possibility of the former;—also that the Ego which appears in the latter, still remains in the former in its mere Manifestation, and is there taken into account, although in its Actuality it is abolished along with Instinct.

XIII.

In the Thought thus described I merely conceive of Knowledge as that which may be the Manifestation of the Divine Life, and,—since this possibility is the expression of God and is thus founded in Being,—as that which shall be the Manifestation of the Divine Life;—but I myself by no means am this. To be this actually no outward power can compel me; as before no outward power could compel me even to realize the Intuition of the true Material World, or to elevate myself to Pure Thought, and thereby to an actual although empty insight into the absolutely formal Imperative. This remains in my own power; but now,

since all the practical conditions are fulfilled, it stands immediately in my power.

If, setting aside on the one hand mere void Intuition, and on the other empty Intelligizing, I should now, with absolute freedom and independence of these, realize my Power, what would ensue? A Manifestation;—a Knowledge therefore which, through Intelligizing, I already know as the Manifestation of God; but which, in the Knowledge thus realized, immediately appears to me as that which I absolutely shall;—a Knowledge, the substance of which proceeds neither from the World of Sense, for this is abolished,—nor from contemplation of the mere empty Form of Knowledge, for this too I have cast aside;—but which exists through itself absolutely as it is, just as the Divine Life, whose Manifestation it is, is through itself absolutely as it is.

I know now what I shall. But all Actual Knowledge brings with it, by its formal nature, its Manifested apposition;—although I now know of the Manifestation of God, yet I am not yet immediately this Manifestation, but I am only a Manifestation of the Manifestation. The required Being is not yet realized.

I shall be. Who is this I? Evidently that which is,—the Ego given in Intuition,—the Individual. This shall be.

What does its Being signify? It is given as a Principle in the World of Sense. Blind Instinct is indeed annihilated, and in its place there now stands the clearly perceived Shall. But the Power that at first set this Instinct in motion remains, in order that the Shall may now set it (the Power) in motion, and become its higher determining Principle. By means of this Power I shall therefore, within its sphere,—the World of Sense,—produce and make manifest that which I recognize as my true Being in the super-sensuous World.

The Power is given as an Infinite;—hence that which in the One World of Thought is absolutely One—that which I shall—becomes in the World of Intuition an infinite problem for my Power, which I have to solve in all Eternity.

This Infinitude, which is properly a mere indefiniteness, can have place only in Intuition, but by no means in my true Essential Being, which, as the Manifestation of God, is as simple and unchangeable as himself. How then can this simplicity and unchangeableness be produced within the yet continuing Infinitude, which is expressly consecrated by the absolute Shall addressed to me as an Individual?

If, in the onflow of Time, the Ego, in every successive moment, had

to determine itself by a particular act, through the conception of what it shall,—then, in its original Unity, it was assuredly indeterminate, and only continuously determinable in an Infinite Time. But such an act of determination could only become possible in Time, in opposition to some resisting power. This resisting power, which was thus to be conquered by the act of determination, could be nothing else than the Sensuous Instinct; and hence the necessity of such a continuous self-determination in Time would be the sure proof that the Instinct was not yet thoroughly abolished; which abolition we have made a condition of entering upon the life in God.

Through the actual and complete annihilation of the Instinct, that infinite determinability is itself annihilated, and absorbed in a single, absolute determination. This determination is the absolute and simple Will which makes the likewise simple Imperative the impulsive principle of the Power. Even if this Power should still flow forth into Infinitude, as it must do, the variety is only in its products, not in itself: —it is simple, and its purpose is simple, and this purpose is at once and forever completed.

And thus then the Will is that point in which Intelligizing, and Intuition or Reality, thoroughly inter-penetrate each other. It is a real principle,—for it is absolute, irresistibly determining the Power, while it also maintains and supports itself;—it is an intelligizing principle,—for it penetrates itself, and recognizes the Imperative. In it the Power is completely exhausted, and the Manifestation of the Divine Life elevated to Actuality.

The infinite activity of the Power itself is not for its own sake, and as an ultimate end; but it is only for the sake of evidencing, in Intuition, the Being of the Will.

XIV.

Thus then does the Doctrine of Knowledge, which in its substance is the realization of the absolute Power of intelligizing which has now been defined, end with the recognition of itself as a mere Manifestation in a Doctrine of Wisdom, although indeed a necessary and indispensable means to such a Doctrine:—a Manifestation, the sole aim of which is, with the Knowledge thus acquired,—by which Knowledge alone a Will, clear and intelligible to itself and reposing upon itself without wavering or perplexity, is possible,—to return wholly into Actual Life;—not into the Life of blind and irrational Instinct which we have laid bare in all its nothingness, but into the Divine Life which shall become visible to us.

SCHELLING AND HEGEL

GEORG WILHELM FRIEDRICH HEGEL was born at Stuttgart, August 27, 1770. He entered Tübingen University in 1788, and received his master's degree in 1790.

FRIEDRICH WILHELM JOSEPH VON SCHELLING (1775-1854) entered the same university in 1790. Although only sixteen, Schelling exerted a great influence on Hegel, and the two were long associated. Hegel took a place as a private tutor at Berne in 1793, but kept up a correspondence with Schelling. When Fichte's *Science of Knowledge* came out, Hegel and Schelling at once took a deep interest in it.

Fichte had tried to conceive the universe as the creation of the conscious Ego, Schelling began to study the other pole of the question and consider the universe as a realization of a world-spirit in time and space. All this time Schelling seems to have carried Hegel with him. Afterward when Schelling began to use the magnet to symbolize by its two poles the relation of subject and object and their development from an indeterminate middle ground, Hegel began to break away from this indeterminate ground and substitute for it life and spirit. His philosophy is an attempt to view the development of civilization and of each individual mind as the history of the effort of the world-spirit to realize itself in its fullest and highest capacity.

Hegel died of cholera November 14, 1831. His disciples, like those of all the idealists, ran into absurd extremes, but his thought has, nevertheless, been of the greatest influence and intensely stimulating. It has held a mirror up to history that has showed the evolution of essential ideas in the midst of seemingly accidental events.

THE DEVELOPMENT OF SPIRIT

The present standpoint of philosophy is that the Idea is known in its necessity; the sides of its diremption, Nature and Spirit, are each of them recognized as representing the totality of the Idea, and not only as being in themselves identical, but as producing this one identity from

themselves; and in this way the identity is recognized as necessary. Nature, and the world or history of spirit, are the two realities; what exists as actual Nature is an image of divine Reason; the forms of self-conscious Reason are also the forms of Nature. The ultimate aim and business of philosophy is to reconcile thought or the Notion with reality. It is easy from subordinate standpoints to find satisfaction in modes of intuitive perception and of feeling. But the deeper the spirit goes within itself, the more vehement is the opposition, the more abundant is the wealth without; the depth is to be measured by the greatness of the craving with which spirit seeks to find itself in what lies outside of itself. We saw the thought which apprehends itself appearing; it strove to make itself concrete within itself. Its first activity is formal; Aristotle was the first to say that *nous* is the thought of thought. The result is the thought which is at home with itself, and at the same time embraces the universe therein, and transforms it into an intelligent world. In apprehension the spiritual and the natural universe are inter-penetrated as one harmonious universe, which withdraws into itself, and in its various aspects develops the Absolute into a totality, in order, by the very process of so doing, to become conscious of itself in its unity, in Thought. Philosophy is thus the true theodicy, as contrasted with art and religion and the feelings which these call up—a reconciliation of spirit, namely, of the spirit which has apprehended itself in its freedom and in the riches of its reality.

To this point the World-spirit has come, and each stage has its own form in the true system of Philosophy; nothing is lost, all principles are preserved, since Philosophy in its final aspect is the totality of forms. This concrete idea is the result of the strivings of spirit during almost twenty-five centuries of earnest work to become objective to itself, to know itself:

Tantae molis erat, se ipsam cognoscere mentem.

All this time was required to produce the philosophy of our day; so tardily and slowly did the World-spirit work to reach this goal. What we pass in rapid review when we recall it, stretched itself out in reality to this great length of time. For in this lengthened period, the Notion of Spirit, invested with its entire concrete development, its external subsistence, its wealth, is striving to bring spirit to perfection, to make progress itself and to develop from spirit. It goes ever on and on, because spirit is progress alone. Spirit often seems to have forgotten

and lost itself, but inwardly opposed to itself, it is inwardly working ever forward (as when Hamlet says of the ghost of his father, "Well said, old mole! canst work i' the ground so fast?"), until grown strong in itself it bursts asunder the crust of earth which divided it from the sun, its Notion, so that the earth crumbles away. At such a time, when the encircling crust, like a soulless decaying tenement, crumbles away, and spirit displays itself arrayed in new youth, the seven league boots are at length adopted. This work of the spirit to know itself, this activity to find itself, is the life of the spirit and the spirit itself. Its result is the Notion which it takes up of itself; the history of Philosophy is a revelation of what has been the aim of spirit throughout its history; it is therefore the world's history in its innermost signification. This work of the human spirit in the recesses of thought is parallel with all the stages of reality; and therefore no philosophy oversteps its own time. The importance which the determinations of thought possessed is another matter, which does not belong to the history of Philosophy. These Notions are the simplest revelation of the World spirit: in their more concrete form they are history.

We must, therefore, in the first place not esteem lightly what spirit has won, namely, its gains up to the present day. Ancient Philosophy is to be reverenced as necessary, and as a link in this sacred chain, but all the same nothing more than a link. The present is the highest stage reached. In the second place, all the various philosophies are no mere fashionable theories of the time, or anything of a similar nature; they are neither chance products nor the blaze of a fire of straw, nor casual eruptions here and there, but a spiritual, reasonable, forward advance; they are of necessity one Philosophy in its development, the revelation of God, as He knows Himself to be. Where several philosophies appear at the same time, they are different sides which make up one totality forming their basis; and on account of their one-sidedness we see the refutation of the one by the other. In the third place, we do not find here feeble little efforts to establish or to criticize this or that particular point; instead of that, each philosophy sets up a new principle of its own, and this must be recognized.

If we glance at the main epochs in the whole history of Philosophy, and grasp the necessary succession of stages in the leading moments, each of which expresses a determinate Idea, we find that after the Oriental whirl of subjectivity, which attains to no intelligibility and therefore to no subsistence, the light of thought dawned among the Greeks.

1. The philosophy of the ancients had the absolute Idea as its thought; and the realization or reality of the same consisted in comprehending the existing present world, and regarding it as it is in its absolute nature. This philosophy did not make its starting point the Idea itself, but proceeded from the objective as from something given, and transformed the same into the Idea; the Being of Parmenides.

2. Abstract thought, *nous*, became known to itself as universal essence or existence, not as subjective thought; the Universal of Plato.

3. In Aristotle the Notion emerges, free and unconstrained, as comprehending thought, permeating and spiritualizing all the forms which the universe contains.

4. The Notion as subject, its independence, its inwardness, abstract separation, is represented by the Stoics, Epicureans and Sceptics: here we have not the free, concrete form, but universality abstract and in itself formal.

5. The thought of totality, the intelligible world, is the concrete Idea as we have seen it with the Neo-Platonists. This principle is ideality generally speaking, which is present in all reality, but not the Idea which knows itself: this is not reached until the principle of subjectivity, individuality, found a place in it, and God as spirit became actual to himself in self-consciousness.

6. But it has been the work of modern times to grasp this Idea as spirit, as the Idea that knows itself. In order to proceed from the conscious Idea to the self-conscious, we must have the infinite opposition, namely, the fact that the Idea has come to the consciousness of being absolutely sundered in twain. As spirit had the thought of objective existence, Philosophy thus perfected the intellectuality of the world, and produced this spiritual world as an object existing beyond present reality, like Nature,—the first creation of spirit. The work of the spirit now consisted in bringing this Beyond back to reality, and guiding it into self-consciousness. This is accomplished by self-consciousness thinking itself, and recognizing absolute existence to be the self-consciousness that thinks itself. With Descartes pure thought directed itself on that separation which we spoke of above. Self-consciousness, in the first place, thinks of itself as consciousness; therein is contained all objective reality, and the positive, intuitive reference of its reality to the other side. With Spinoza Thought and Being are opposed and yet identical; he has the intuitive perception of substance, but the knowledge of substance in his case is external. We have here the principle of

reconciliation taking its rise from thought as such, in order to abrogate the subjectivity of thought: this is the case in Leibnitz's monad, which possesses the power of representation.

7. In the second place, self-consciousness thinks of itself as being self-consciousness; in being self-conscious it is independent, but still in this independence it has a negative relation to what is outside self-consciousness. This is infinite subjectivity, which appears at one time as the critique of thought in the case of Kant, and at another time, in the case of Fichte, as the tendency or impulse towards the concrete. Absolute, pure, infinite form is expressed as self-consciousness, the Ego.

8. This is a light that breaks forth on spiritual substance, and shows absolute content and absolute form to be identical;—substance in itself is identical with knowledge. Self-consciousness thus, in the third place, recognizes its positive relation as its negative, and its negative as its positive,—or, in other words, recognizes these opposite activities as the same, *i. e.*, it recognizes pure Thought or Being as self-identity, and this again as separation. This is intellectual perception; but it is requisite in order that it should be in truth intellectual, that it should not be that merely immediate perception of the eternal and the divine which we hear of, but should be absolute knowledge. This intuitive perception which does not recognize itself is taken as starting point as if it were absolutely presupposed; it has in itself intuitive perception only as immediate knowledge, and not as self-knowledge: or it knows nothing, and what it perceives it does not really know,—for, taken at its best, it consists of beautiful thoughts, but not knowledge.

But intellectual intuition is knowledge, since, in the first place, in spite of the separation of each of the opposed sides from the other, all external reality is known as internal. If it is known according to its essence, as it is, it shows itself as not existing of itself, but as essentially consisting in the movement of transition. This Heraclitean or Sceptical principle, that nothing is at rest, must be demonstrated of each individual thing; and thus in this consciousness—that the essence of each thing lies in determination, in what is the opposite of itself—there appears the apprehended unity with its opposite. Similarly this unity is, in the second place, to be recognized even in its essence; its essence as this identity is, in the same way, to pass over into its opposite, or to realize itself, to become for itself something different; and thus the opposition in it is brought about by itself. Again, it may be said of the opposition, in the third place, that it is not in the Absolute; this Abso-

lute is existence, the eternal, etc. This is, however, itself an abstraction in which the Absolute is apprehended in a one-sided manner only, and the opposition is apprehended only as ideal; but in fact it is form, as the essential moment of the movement of the Absolute. This Absolute is not at rest, and that opposition is not the unresting Notion; for the Idea, unresting though it is, is yet at rest and satisfied in itself. Pure thought has advanced to the opposition of the subjective and objective; the true reconciliation of the opposition is the perception that this opposition, when pushed to its absolute extreme, resolves itself; as Schelling says, the opposites are in themselves identical—and not only in themselves, but eternal life consists in the very process of continually producing the opposition and continually reconciling it. To know opposition in unity, and unity in opposition—this is absolute knowledge; and science is the knowledge of this unity in its whole development by means of itself.

This is then the demand of all time and of Philosophy. A new epoch has arisen in the world. It would appear as if the World-spirit had at last succeeded in stripping off from itself all alien objective existence, and apprehending itself at last as absolute spirit, in developing from itself what for it is objective, and keeping it within its own power, yet remaining at rest all the while. The strife of the finite self-consciousness with the absolute self-consciousness, which last seemed to the other to lie outside of itself, now comes to an end. Finite self-consciousness has ceased to be finite; and in this way absolute self-consciousness has, on the other hand, attained to the reality which it lacked before. This is the whole history of the world in general up to the present time, and the history of Philosophy in particular, the sole work of which is to depict this strife. Now, indeed, it seems to have reached its goal, when this absolute self-consciousness, which it had the work of representing, has ceased to be alien, and when spirit accordingly is realized as spirit. For it becomes such only as the result of its knowing itself to be absolute spirit, and this it knows in real scientific knowledge. Spirit produces itself as Nature, as the State; nature is its unconscious work, in the course of which it appears to itself something different, and not spirit; but in the State, in the deeds and life of History, as also of Art, it brings itself to pass with consciousness; it knows various modes of its reality, yet they are only modes. In scientific knowledge alone it knows itself as absolute spirit; and this knowledge, or spirit, is its only true existence. This then is the standpoint of the present day,

and the series of spiritual forms is with it for the present concluded.

At this point I bring this history of Philosophy to a close. It has been my desire that you should learn from it that the history of Philosophy is not a blind collection of fanciful ideas, nor a fortuitous progression. I have rather sought to show the necessary development of the successive philosophies from one another, so that the one of necessity presupposes another preceding it. The general result of the history of Philosophy is this: in the first place, that throughout all time there has been only one Philosophy, the contemporary differences of which constitute the necessary aspects of the one principle; in the second place, that the succession of philosophic systems is not due to chance, but represents the necessary succession of stages in the development of this science; in the third place, that the final philosophy of a period is the result of this development, and is truth in the highest form which the self-consciousness of spirit affords of itself. The latest philosophy contains therefore those which went before; it embraces in itself all the different stages thereof; it is the product and result of those that preceded it. We can now, for example, be Platonists no longer. Moreover, we must raise ourselves once for all, above the pettiness of individual opinions, thoughts, objections and difficulties; and also above our own vanity, as if our individual thoughts were of any particular value. For to apprehend the inward substantial spirit is the standpoint of the individual; as parts of the whole, individuals are like blind men, who are driven forward by the indwelling spirit of the whole. Our standpoint now is accordingly the knowledge of this Idea as spirit, as absolute spirit, which in this way opposes to itself another spirit, the finite, the principle of which is to know absolute spirit, in order that absolute spirit may become existent for it. I have tried to develop and bring before your thoughts this series of successive spiritual forms pertaining to Philosophy in its progress, and to indicate the connection between them. This series is the true kingdom of spirits, the only kingdom of spirits that there is—it is a series which is not a multiplicity, nor does it even remain a series, if we understand thereby that one of its members merely follows on another; but in the very process of coming to the knowledge of itself it is transformed into the moments of the one Spirit, or the one self-present Spirit. This long procession of spirits is formed by the individual pulses which beat in its life; they are the organism of our substance, an absolutely necessary progression, which expresses nothing less than the nature of the spirit itself, and which lives in us all. We

have to give ear to its urgency—when the mole that is within forces its way on—and we have to make it a reality. It is my desire that this history of Philosophy should contain for you a summons to grasp the spirit of the time, which is present in us by nature, and—each in his own place—consciously to bring it from its natural condition, *i. e.*, from its lifeless seclusion, into the light of day.

I have to express my thanks to you for the attention with which you have listened to me while I have been making this attempt; it is in great measure due to you that my efforts have met with so great a measure of success. And it has been a source of pleasure to myself to have been associated with you in this spiritual community; I ought not to speak of it as if it were a thing of the past; for I hope that a spiritual bond has been knit between us which will prove permanent. I bid you a most hearty farewell.

SCHOPENHAUER

Arthur Schopenhauer was born in Dantzic (117 Heilgen-Geist Strasse) February 22, 1788. His father was a banker and his mother, Johanna, a writer of novels and books of travel. He entered the University of Göttingen in 1809, where he studied philosophy under Schulze, the skeptic, and gave a great deal of attention to Kant and Plato. In 1811 he attended Fichte's lectures at Berlin. For his degree at Jena in 1813 he wrote his essay "On the Fourfold Root of the Principle of Sufficient Reason." In this he points out the distinction between reason as the ground of belief and as the cause of a material fact. Thus real objects are tied together by cause and effect in a chain; propositions as premises and conclusions; in the formal conditions of perception, the parts are reciprocal; in voluntary agents the cause is a motive idea.

In 1814 Schopenhauer, who had lived at home in Weimar for a few months, quarreled with his mother and never saw her again till her death in 1838. Even in 1814, at the age of 26, he had grown to be gloomy, pessimistic, and disputatious.

At this time he had become much interested in the Brahman Upani-

shads. In science he enlarged upon Goethe's theory of colors and wrote his essay "On Seeing and Color" in 1816.

In 1819 he published his chief work, "The World as Will and Idea." The main thought of this work is that a natural Will is Kant's "thing-in-itself," and he attempts to develop a conception of the universe as the developing expressions of this natural Will.

He believed in annihilation as the goal of existence—the old Hindoo idea. His essays are extremely pessimistic and he was especially bitter against the philosophy of Fichte, Schelling and Hegel, but in later life the fact that his philosophy was beginning to be popular, somewhat softened his temper.

He died September 21, 1860.

THE WILL IN NATURE

I break silence after seventeen years, in order to point out to the few who, in advance of the age, may have given their attention to my philosophy, sundry corroborations which have been contributed to it by unbiased empiricists, unacquainted with my writings, who, in pursuing their own road in search of merely empirical knowledge, discovered at its extreme end what my doctrine has propounded as the Metaphysical (*das Metaphysische*), from which the explanation of experience as a whole must come. This circumstance is the more encouraging, as it confers upon my system a distinction over all hitherto existing ones; for all the other systems, even the latest—that of Kant—still leave a wide gap between their results and experience, and are far from coming down directly to, and into contact with, experience. By this my Metaphysic proves itself to be the only one having an extreme point in common with the physical sciences: a point up to which these sciences come to meet it by their own paths, so as to really connect themselves and to harmonize with it. Moreover, this is not brought about by twisting and straining the empirical sciences in order to adopt them to Metaphysic, nor by Metaphysic having been secretly abstracted from them beforehand and then *a la* Schelling, finding *a priori* what it had learnt *a posteriori*. On the contrary, both meet at the same point of their own accord, yet without collusion. My system, therefore, far from soaring above all reality, and all experience, descends to the firm ground of actuality, where its lessons are continued by the Physical Sciences.

Now the extraneous and empirical corroborations I am about to bring forward, all concern the kernel and chief point of my doctrine, its Metaphysic proper. They concern, that is, the paradoxical fundamental truth.

that what Kant opposed as *thing in itself* to mere *phenomenon*—called more decidedly by me *representation*—and what he held to be absolutely unknowable, that this *thing in itself,* this substratum of all phenomena, and therefore of the whole of Nature, is nothing but what we know directly and intimately and find within ourselves as *the will;*

that accordingly, this *will,* far from being inseparable from, and even a mere result of, *knowledge,* differs radically and entirely from, and is quite independent of, knowledge, which is secondary and of later origin; and can consequently subsist and manifest itself without knowledge: a thing which actually takes place throughout the whole of Nature, from the animal kingdom downwards;

that this *will,* being the one and only thing in itself, the sole truly real, primary, metaphysical thing in a world in which everything else is only phenomenon—*i. e.* mere representation—gives all things, whatever they may be, the power to exist and to act;

that accordingly, not only the voluntary actions of animals, but the organic mechanism, nay even the shape and quality of their living body, the vegetation of plants and finally, even in inorganic Nature, crystallization, and in general every primary force which manifests itself in physical and chemical phenomena, not excepting Gravity,—that all this, I say, in itself, *i. e.* independently of phenomenon (which only means, independently of our brain and its representations), is absolutely identical with the *will* we find within us and know as intimately as we can know anything;

that further, the individual manifestations of the will are set in motion by *motives* in beings gifted with an intellect, but no less by *stimuli* in the organic life of animals and of plants, and finally in all inorganic Nature, by *causes* in the narrowest sense of the word—these distinctions applying exclusively to phenomena;

that, on the other hand, knowledge with its substratum, the intellect, is a merely secondary phenomenon, differing completely from the will, only accompanying its higher degrees of objectification and not essential to it; which, as it depends upon the manifestations of the will in the animal organism, is therefore physical, and not, like the will, metaphysical;

that we are never able therefore to infer absence of will from absence of knowledge; for the will may be pointed out even in all phenomena of unconscious Nature, whether in plants or in inorganic bodies; in short,

that the will is not conditioned by knowledge, as has hitherto been universally assumed, although knowledge *is* conditioned by the will.

Now this fundamental truth, which even to-day sounds so like a paradox, is the part of my doctrine to which, in all its chief points, the empirical sciences—themselves ever eager to steer clear of all Metaphysic—have contributed just as many confirmations forcibly elicited by the irresistible cogency of truth, but which are most surprising on account of the quarter whence they proceed; and although they have certainly come to light since the publication of my chief work, it has been quite independently of it and as the years went on. Now, that it should be precisely this fundamental doctrine of mine which has thus met with confirmation, is advantageous in two respects. First, because it is the main thought upon which my system is founded; secondly, because it is the only part of my philosophy that admits of confirmation through sciences which are alien to, and independent of, it. For although the last seventeen years, during which I have been constantly occupied with this subject, have, it is true, brought me many corroborations as to other parts, such as Ethics, Æsthetics, Dianoiology; still these, by their very nature, pass at once from the sphere of actuality, whence they arise, to that of philosophy itself: so they cannot claim to be extraneous evidence, nor can they, as collected by me, have the same irrefragable, unequivocal cogency as those concerning Metaphysics proper, which are given by its correlate Physics (in the wide sense of the word which the Ancients gave it). For, in pursuing its own road, Physics, *i. e.,* Natural Science as a whole, must in all its branches finally come to a point where physical explanation ceases. Now this is precisely the Metaphysical, which Natural Science only apprehends as the impassable barrier at which it stops short and henceforth abandons its subject to Metaphysics. Kant therefore was quite right in saying: "It is evident, that the primary sources of Nature's agency must absolutely belong to the sphere of Metaphysics." Physical science is wont to designate this unknown, inaccessible something, at which its investigations stop short and which is taken for granted in all its explanations, by such terms as physical force, vital force, formative principle, etc., etc., which in fact mean no more than x, y, z. Now if nevertheless, in single, pro-

pitious instances, specially acute and observant investigators succeed in casting, as it were, a furtive glance behind the curtain which bounds off the domain of Natural Science, and are able not only to feel it is a barrier, but, in a sense, to obtain a view of its nature and thus to peep in the metaphysical region beyond; if, moreover, having acquired this privilege, they explicitly designate the limit thus explored downright as that which is stated to be the true inner essence and final principle of all things by a system of Metaphysics unknown to them, which takes its reasons from a totally different sphere and, in every other respect, recognizes all things merely as phenomena, *i. e.,* as representation—then indeed the two bodies of investigators must feel like two mining engineers driving a gallery, who, having started from two points far apart and worked for some time in subterranean darkness, trusting exclusively to compass and spirit-level, suddenly to their great joy catch the sound of each other's hammers. For now indeed these investigators know, that the point so long vainly sought for has at last been reached at which Metaphysics and Physics meet—they, who were as hard to bring together as Heaven and Earth—that a reconciliation has been initiated and a connection found between these two sciences. But the philosophical system which has witnessed this triumph receives by it the strongest and most satisfactory proof possible of its own truth and accuracy. Compared with such a confirmation as this, which may, in fact, be looked upon as equivalent to proving a sum in arithmetic, the regard or disregard of a given period of time loses all importance, especially when we consider what has been the subject of interest meanwhile and find it to be—the sort of philosophy we have been treated to since Kant. The eyes of the public are gradually opening to the mystification by which it has been duped for the past forty years under the name of philosophy, and this will be more and more the case. The day of reckoning is at hand, when it will see whether all this endless scribbling and quibbling since Kant has brought to light a single truth of any kind. I may thus be dispensed from the obligation of entering here into subjects so unworthy; the more so, as I can accomplish my purpose more briefly and agreeably by narrating the following anecdote. During the carnival, Dante having lost himself in a crowd of masks, the Duke of Medici ordered him to be sought for. Those commissioned to look for him, being doubtful whether they would be able to find him, as he was himself masked, the Duke gave them a question to put to every mask they might meet who resembled Dante. It was this: "Who

knows what is good?" After receiving several foolish answers, they finally met with a mask who replied: "He that knows what is bad," by which Dante was immediately recognised. What is meant by this here is, that I have seen no reason to be disheartened on account of the want of sympathy of my contemporaries, since I had at the same time before my eyes the objects of their sympathy. What those authors were, posterity will see by their works; what the contemporaries were, will be seen by the reception they gave to those works. My doctrine lays no claim whatever to the name "Philosophy of the present time" which was disputed to the amusing adepts of Hegel's mystification; but it certainly does claim the title of "Philosophy of time to come:" that is, of a time when people will no longer content themselves with a mere jingle of words without meaning, with empty phrases and trivial parallelisms, but will exact real contents and serious disclosures from philosophy, while, on the other hand, they will exempt it from the unjust and preposterous obligation of paraphrasing the national religion for the time being. "For it is an extremely absurd thing," says Kant, "to expect to be enlightened by Reason and yet to prescribe to her beforehand on which side she must incline."—It is indeed sad to live in an age so degenerate, that it should be necessary to appeal to the authority of a great man to attest so obvious a truth. But it is absurd to expect marvels from a philosophy that is chained up, and particularly amusing to watch the solemn gravity with which it sets to work to accomplish great things, when we all know beforehand "the short meaning of the long speech." However the keen-sighted assert that under the cloak of philosophy they can mostly detect theology holding forth for the edification of students thirsting after truth, and instructing them after its own fashion;—and this again reminds us forcibly of a certain favourite scene in Faust. Others, who think that they see still further into the matter, maintain that what is thus disguised is neither theology nor philosophy, but simply a poor devil who, while solemnly protesting that he has lofty, sublime truth for his aim, is in fact only striving to get bread for himself and for his future young family. This he might no doubt obtain by other means with less labour and more dignity; meanwhile however for this price he is ready to do anything he is asked to do, even to deduce *a priori,* nay, should it come to the worst, to perceive, the "Devil and his dam," by intellectual intuition—and here indeed the exceedingly comical effect is brought to a climax by the contrast between the sublimity of the ostensible, and the lowliness of the real, aim. It

remains nevertheless desirable, that the pure, sacred precincts of philosophy should be cleansed of all such traders, as was the temple of Jerusalem in former times of the buyers and sellers.—Biding such better times therefore, may our philosophical public bestow its attention and interest as it has done hitherto. May it continue as before invariably naming Fichte as an obligato accompaniment to, and in the same breath with, Kant—that great mind, produced but once by Nature, which has illumined its own depth—as if forsooth they were of the same kind; and this without a single voice being heard to exclaim in protest, *Heracles kai pithekos.* May Hegel's philosophy of absolute nonsense—three-fourths cash and one-fourth crazy fancies—continue to pass for unfathomable wisdom without anyone suggesting as an appropriate motto for his writings Shakespeare's words: "Such stuff as madmen tongue and brain not," or, as an emblematical vignette, the cuttle-fish with its ink-bag, creating a cloud of darkness around it to prevent people from seeing what it is, with the device: *mea caligine tutus.*—May each day bring us, as hitherto, new systems adapted for University purposes, entirely made up of words and phrases and in a learned jargon besides, which allows people to talk whole days without saying anything; and may these delights never be disturbed by the Arabian proverb: "I hear the clappering of the mill, but I see no flour."—For all this is in accordance with the age and must have its course. In all times some such thing occupies the contemporary public more or less noisily; then it dies off so completely, vanishes so entirely, without leaving a trace behind that the next generation no longer knows what it was. Truth can bide its time, for it has a long life before it. Whatever is genuine and seriously meant, is always slow to make its way and certainly attains its end almost miraculously; for on its first appearance it as a rule meets with a cool, if not ungracious, reception: and this for exactly the same reason that, when once it is fully recognised and has passed on to posterity, the immense majority of men take it on credit, in order to avoid compromising themselves, whereas the number of genuine appreciators remains nearly as small as it was at first. These few nevertheless suffice to make the truth respected, for they are themselves respected. And thus it is passed from hand to hand through centuries over the heads of the inept multitude: so hard is the existence of mankind's best inheritance!—On the other hand, if truth had to crave permission to be true from such as have quite different aims at heart, its cause might indeed be given up for lost; for then it might often be dismissed with the

witches' watchword: "fair is foul, and foul is fair." Luckily, however, this is not the case. Truth depends upon no one's favour or disfavour, nor does it ask anyone's leave: it stands upon its own feet, and has Time for its ally; its power is irresistible, its life indestructible.

AUGUSTE COMTE

Isidore Auguste Marie Francois Xavier Comte was born in Montpelier, France, January 19, 1798. In 1814 he entered the Polytechnic school in Paris, but was sent home for mutinous conduct. He returned to Paris, however, and as his income of about $400 a year enabled him to exist, he devoted himself to meditating on the social conditions of the time.

He came under the influence of Saint Simon and was for several years enchanted with the veteran philosopher. The two permanently separated in 1824.

The next year Comte married, but his marriage was far from a happy one.

A course of lectures he began in 1826 was discontinued because he was afflicted with brain trouble, and not renewed until 1828. From 1820 to 1842 he published his "Course of Positive Philosophy." Its main idea is the development of man's thought through the theological and philosophical periods to the positive or scientific stage, and the development of the knowledge of the time from the positive standpoint. Incidentally at the same time he laid the foundation of social science.

The same year (1842) he separated from his wife. Troubles with his publisher, loss of his post as examiner of the Polytechnic school, and consequent hardship increased his troubles. John Stuart Mill aided him at first, but Comte's continued calls for aid estranged even him. From 1848 to 1857, the year of his death, he lived mostly on subscriptions from friends of his ideas.

His laws of the three stages, and the parallelism between the progress of the individual and the race, and his analysis of social evolution as the necessary result of social conditions have had an immense influence on subsequent thought.

The best expression of his work in English is the condensation of the Positive Philosophy by Harriet Martineau. It is itself a masterpiece and was given a place in the Positivist library by Comte himself.

THE POSITIVE PHILOSOPHY

A general statement of any system of philosophy may be either a sketch of a doctrine to be established, or a summary of a doctrine already established. If greater value belongs to the last, the first is still important, as characterizing from its origin the subject to be treated. In a case like the present, where the proposed study is vast and hitherto indeterminate, it is especially important that the field of research should be marked out with all possible accuracy. For this purpose, I will glance at the considerations which have originated this work, and which will be fully elaborated in the course of it.

In order to understand the true value and character of the Positive Philosophy, we must take a brief general view of the progressive course of the human mind, regarded as a whole; for no conception can be understood otherwise than through its history.

From the study of the development of human intelligence, in all directions, and through all times, the discovery arises of a great fundamental law, to which it is necessarily subject, and which has a solid foundation of proof, both in the facts of our organization and in our historical experience. The law is this:—that each of our leading conceptions,—each branch of our knowledge,—passes successively through three different theoretical conditions: the Theological, or fictitious; the Metaphysical, or abstract; and the Scientific, or positive. In other words, the human mind, by its nature, employs in its progress three methods of philosophizing, the character of which is essentially different, and even radically opposed: viz., the theological method, the metaphysical, and the positive. Hence arise three philosophies, or general systems of conceptions on the aggregate of phenomena, each of which excludes the others. The first is the necessary point of departure of the human understanding; and the third is its fixed and definitive state. The second is merely a state of transition.

In the theological state, the human mind, seeking the essential nature of beings, the first and final causes (the origin and purpose)

of all effects,—in short, Absolute knowledge,—supposes all phenomena to be produced by the immediate action of supernatural beings.

In the metaphysical state, which is only a modification of the first, the mind supposes, instead of supernatural beings, abstract forces, veritable entities (that is, personified abstractions) inherent in all beings, and capable of producing all phenomena. What is called the explanation of phenomena is, in this stage, a mere reference of each to its proper entity.

In the final, the positive state, the mind has given over the vain search after Absolute notions, the origin and destination of the universe, and the causes of phenomena, and applies itself to the study of their laws,—that is, their invariable relations of succession and resemblance. Reasoning and observation, duly combined, are the means of this knowledge. What is now understood when we speak of an explanation of facts is simply the establishment of a connection between single phenomena and some general facts, the number of which continually diminishes with the progress of science.

The Theological system arrived at the highest perfection of which it is capable when it substituted the providential action of a single Being for the varied operations of the numerous divinities which had been before imagined. In the same way, in the last stage of the Metaphysical system, men substitute one great entity (Nature) as the cause of all phenomena, instead of the multitude of entities at first supposed. In the same way, again, the ultimate perfection of the Positive system would be (if such perfection could be hoped for) to represent all phenomena as particular aspects of a single general fact;—such as Gravitation, for instance.

The importance of the working of this general law will be established hereafter. At present, it must suffice to point out some of the grounds of it.

There is no science which, having attained the positive stage, does not bear marks of having passed through the others. Some time since it was (whatever it might be) composed, as we can now perceive, of metaphysical abstractions; and, further back in the course of time, it took its form from theological conceptions. We shall have only too much occasion to see, as we proceed, that our most advanced sciences still bear very evident marks of the two earlier periods through which they have passed.

The progress of the individual mind is not only an illustration, but

an indirect evidence of that of the general mind. The point of departure of the individual and of the race being the same, *the phases of the mind of a man correspond to the epochs of the mind of the race.* Now, each of us is aware, if he looks back upon his own history, that he was a theologian in his childhood, a metaphysician in his youth, and a natural philosopher in his manhood. All men who are up to their age can verify this for themselves.

Besides the observation of facts, we have theoretical reasons in support of this law.

The most important of these reasons arises from the necessity that always exists for some theory to which to refer our facts, combined with the clear impossibility that, at the outset of human knowledge, men could have formed theories out of the observation of facts. All good intellects have repeated, since Bacon's time, that there can be no real knowledge but that which is based on observed facts. This is incontestible, in our present advanced stage; but, if we look back to the primitive stage of human knowledge, we shall see that it must have been otherwise then. If it is true that every theory must be based upon observed facts, it is equally true that facts cannot be observed without the guidance of some theory. Without such guidance, our facts would be desultory and fruitless; we could not retain them: for the most part we could not even perceive them.

Thus, between the necessity of observing facts in order to form a theory, and having a theory in order to observe facts, the human mind would have been entangled in a vicious circle, but for the natural opening afforded by Theological conceptions. This is the fundamental reason for the theological character of the primitive philosophy. This necessity is confirmed by the perfect suitability of the theological philosophy to the earliest researches of the human mind. It is remarkable that the most inaccessible questions,—those of the nature of beings, and the origin and purpose of phenomena,—should be the first to occur in a primitive state, while those which are really within our reach are regarded as almost unworthy of serious study. The reason is evident enough:—that experience alone can teach us the measure of our powers; and if men had not begun by an exaggerated estimate of what they can do, they would never have done all that they are capable of. Our organization requires this. At such a period there could have been no reception of a positive philosophy, whose function is to discover the laws of phenomena, and whose leading characteristic it is to regard as

interdicted to human reason those sublime mysteries which theology explains, even to their minutest details, with the most attractive facility. It is just so under a practical view of the nature of the researches with which men first occupied themselves. Such inquiries offered the powerful charm of unlimited empire over the external world,—a world destined wholly for our use, and involved in every way with our existence. The theological philosophy, presenting this view, administered exactly the stimulus necessary to incite the human mind to the irksome labour without which it could make no progress. We can now scarcely conceive of such a state of things, our reason having become sufficiently mature to enter upon laborious scientific researches, without needing any such stimulus as wrought upon the imaginations of astrologers and alchemists. We have motive enough in the hope of discovering the laws of phenomena, with a view to the confirmation or rejection of a theory. But it could not be so in the earliest days; and it is to the chimeras of astrology and alchemy that we owe the long series of observations and experiments on which our positive science is based. Kepler felt this on behalf of astronomy, and Berthollet on behalf of chemistry. Thus was a spontaneous philosophy, the theological, the only possible beginning, method, and provisional system, out of which the Positive philosophy could grow. It is easy, after this, to perceive how Metaphysical methods and doctrines must have afforded the means of transition from the one to the other.

The human understanding, slow in its advance, could not step at once from the theological into the positive philosophy. The two are so radically opposed, that an intermediate system of conceptions has been necessary to render the transition possible. It is only in doing this, that Metaphysical conceptions have any utility whatever. In contemplating phenomena, men substitute for supernatural direction a corresponding entity. This entity may have been supposed to be derived from the supernatural action: but it is more easily lost sight of, leaving attention free for the facts themselves, till, at length, metaphysical agents have ceased to be anything more than the abstract names of phenomena. It is not easy to say by what other process than this our minds could have passed from supernatural considerations to natural; from the theological system to the positive.

The Law of human development being thus established, let us consider what is the proper nature of the Positive Philosophy.

As we have seen, the first characteristic of the Positive Philosophy

is that it regards all phenomena as subjected to invariable natural Laws. Our business is,—seeing how vain is any research into what are called Causes, whether first or final,—to pursue an accurate discovery of these Laws, with a view to reducing them to the smallest possible number. By speculating upon causes, we could solve no difficulty about origin and purpose. Our real business is to analyze accurately the circumstances of phenomena, and to connect them by the natural relations of succession and resemblance. The best illustration of this is in the case of the doctrine of Gravitation. We say that the general phenomena of the universe are explained by it, because it connects under one head the whole immense variety of astronomical facts; exhibiting the constant tendency of atoms towards each other in direct proportion to their masses, and in inverse proportion to the squares of their distances; whilst the general fact itself is a mere extension of one which is perfectly familiar to us, and which we therefore say that we know;—the weight of bodies on the surface of the earth. As to what weight and attraction are, we have nothing to do with that, for it is not a matter of knowledge at all. Theologians and metaphysicians may imagine and refine about such questions; but positive philosophy rejects them. When any attempt has been made to explain them, it has ended only in saying that attraction is universal weight, and that weight is terrestrial attraction; that is, that the two orders of phenomena are identical; which is the point from which the question set out. Again, M. Fourier, in his fine series of researches on Heat, has given us all the most important and precise laws of the phenomena of heat, and many large and new truths, without once inquiring into its nature, as his predecessors had done when they disputed about calorific matter and the action of an universal ether. In treating his subject in the Positive method, he finds inexhaustible material for all his activity of research, without betaking himself to insoluble questions.

Before ascertaining the stage which the Positive Philosophy has reached, we must bear in mind that the different kinds of our knowledge have passed through the three stages of progress at different rates, and have not therefore arrived at the same time. The rate of advance depends on the nature of the knowledge in question, so distinctly that, as we shall see hereafter, this consideration constitutes an accessory to the fundamental law of progress. Any kind of knowledge reaches the positive stage early in proportion to its generality, simplicity, and independence of other departments. Astronomical science, which is above

all made up of facts that are general, simple, and independent of other sciences, arrived first; then terrestrial Physics; then Chemistry, and, at length, Physiology.

It is difficult to assign any precise date to this revolution in science. It may be said, like everything else, to have been always going on; and especially since the labours of Aristotle and the school of Alexandria; and then from the introduction of natural science into the West of Europe by the Arabs. But, if we must fix upon some marked period, to serve as a rallying point, it must be that,—about two centuries ago,—when the human mind was astir under the precepts of Bacon, the conceptions of Descartes, and the discoveries of Galileo. Then it was that the spirit of the Positive philosophy rose up in opposition to that of the superstitious and scholastic systems which had hitherto obscured the true character of all science. Since that date, the progress of the Positive philosophy, and the decline of the other two, have been so marked that no rational mind now doubts that the revolution is destined to go on to its completion,—every branch of knowledge being, sooner or later, brought within the operation of Positive philosophy. This is not yet the case. Some are still lying outside: and not till they are brought in will the Positive philosophy possess that character of universality which is necessary to its definitive constitution.

In mentioning just now the four principal categories of phenomena, —astronomical, physical, chemical, and physiological,—there was an omission which will have been noticed. Nothing was said of Social phenomena. Though involved with the physiological, Social phenomena demand a distinct classification, both on account of their importance and of their difficulty. They are the most individual, the most complicated, the most dependent on all others; and therefore they must be the latest,—even if they had no special obstacle to encounter. This branch of science has not hitherto entered into the domain of Positive philosophy. Theological and metaphysical methods, exploded in other departments, are as yet exclusively applied, both in the way of inquiry and discussion, in all treatment of Social subjects, though the best minds are heartily weary of eternal disputes about divine right and the sovereignty of the people. This is the great, while it is evidently the only gap which has to be filled to constitute, solid and entire, the Positive Philosophy. Now that the human mind has grasped celestial and terrestrial physics,—mechanical and chemical; organic physics, both vegetable and animal,—there remains one science, to fill up the series of

sciences of observation,—Social physics. This is what men have now most need of: and this it is the principal aim of the present work to establish.

It would be absurd to pretend to offer this new science at once in a complete state. Others, less new, are in very unequal conditions of forwardness. But the same character of positivity which is impressed on all the others will be shown to belong to this. This once done, the philosophical system of the moderns will be in fact complete, as there will then be no phenomenon which does not naturally enter into some one of the five great categories. All our fundamental conceptions having become homogeneous, the Positive state will be fully established. It can never again change its character, though it will be for ever in course of development by additions of new knowledge. Having acquired the character of universality which has hitherto been the only advantage resting with the two preceding systems, it will supersede them by its natural superiority, and leave to them only an historical existence.

We have stated the special aim of this work. Its secondary and general aim is this:—to review what has been effected in the Sciences, in order to show that they are not radically separate, but all branches from the same trunk. If we had confined ourselves to the first and special object of the work, we should have produced merely a study of Social physics: whereas, in introducing the second and general, we offer a study of Positive philosophy, passing in review all the positive sciences already formed.

The purpose of this work is not to give an account of the Natural Sciences. Besides that it would be endless, and that it would require a scientific preparation such as no one man possesses, it would be apart from our object, which is to go through a course of not Positive Science, but Positive Philosophy. We have only to consider each fundamental science in its relation to the whole positive system, and to the spirit which characterizes it; that is, with regard to its methods and its chief results.

The two aims, though distinct, are inseparable; for, on the one hand, there can be no positive philosophy without a basis of social science, without which it could not be all-comprehensive; and, on the other hand, we could not pursue Social science without having been prepared by the study of phenomena less complicated than those of society, and furnished with a knowledge of laws and anterior facts which have a

bearing upon social science. Though the fundamental sciences are not all equally interesting to ordinary minds, there is no one of them that can be neglected in an inquiry like the present; and, in the eye of philosophy, all are of equal value to human welfare. Even those which appear the least interesting have their own value, either on account of the perfection of their methods, or as being the necessary basis of all the others.

Lest it should be supposed that our course will lead us into a wilderness of such special studies as are at present the bane of a true positive philosophy, we will briefly advert to the existing prevalence of such special pursuit. In the primitive state of human knowledge there is no regular division of intellectual labour. Every student cultivates all the sciences. As knowledge accrues, the sciences part off; and students devote themselves each to some one branch. It is owing to this division of employment, and concentration of whole minds upon a single department, that science has made so prodigious an advance in modern times; and the perfection of this division is one of the most important characteristics of the Positive philosophy. But, while admitting all the merits of this change, we cannot be blind to the eminent disadvantages which arise from the limitation of minds to a particular study. It is inevitable that each should be possessed with exclusive notions, and be therefore incapable of the general superiority of ancient students, who actually owed that general superiority to the inferiority of their knowledge. We must consider whether the evil can be avoided without losing the good of the modern arrangement; for the evil is becoming urgent. We all acknowledge that the divisions established for the convenience of scientific pursuit are radically artificial; and yet there are very few who can embrace in idea the whole of any one science: each science moreover being itself only a part of a great whole. Almost every one is busy about his own particular section, without much thought about its relation to the general system of positive knowledge. We must not be blind to the evil, nor slow in seeking a remedy. We must not forget that this is the weak side of the positive philosophy, by which it may yet be attacked, with some hope of success, by the adherents of the theological and metaphysical systems. As to the remedy, it certainly does not lie in a return to the ancient confusion of pursuits, which would be mere retrogression, if it were possible, which it is not. It lies in perfecting the division of employments itself,—in carrying it one degree higher,—in constituting one more specialty from the study of sci-

entific generalities. Let us have a new class of students, suitably prepared, whose business it shall be to take the respective sciences as they are, determine the spirit of each, ascertain their relations and mutual connection, and reduce their respective principles to the smallest number of general principles, in conformity with the fundamental rules of the Positive Method. At the same time, let other students be prepared for their special pursuit by an education which recognizes the whole scope of positive science, so as to profit by the labours of the students of generalities, and so as to correct reciprocally, under that guidance, the results obtained by each. We see some approach already to this arrangement. Once established, there would be nothing to apprehend from any extent of division of employments. When we once have a class of learned men, at the disposal of all others, whose business it shall be to connect each new discovery with the general system, we may dismiss all fear of the great whole being lost sight of in the pursuit of the details of knowledge. The organization of scientific research will then be complete; and it will henceforth have occasion only to extend its development, and not to change its character. After all, the formation of such a new class as is proposed would be merely an extension of the principle which has created all the classes we have. While science was narrow, there was only one class: as it expanded, more were instituted. With a further advance a fresh need arises, and this new class will be the result.

The general spirit of a course of Positive Philosophy having been thus set forth, we must now glance at the chief advantages which may be derived, on behalf of human progression from the study of it. Of these advantages, four may be especially pointed out.

I. The study of the Positive Philosophy affords the only rational means of exhibiting the logical laws of the human mind, which have hitherto been sought by unfit methods. To explain what is meant by this, we may refer to a saying of M. de Blainville, in his work on Comparative Anatomy, that every active, and especially every living being, may be regarded under two relations—the Statical and the Dynamical; that is, under conditions or in action. It is clear that all considerations range themselves under the one or the other of these heads. Let us apply this classification to the intellectual functions.

If we regard these functions under their Statical aspect—that is, if we consider the conditions under which they exist—we must determine the organic circumstances of the case, which inquiry involves it

with anatomy and physiology. If we look at the Dynamic aspect, we have to study simply the exercise and results of the intellectual powers of the human race, which is neither more nor less than the general object of the Positive Philosophy. In short, looking at all scientific theories as so many great logical facts, it is only by the thorough observation of these facts that we can arrive at the knowledge of logical laws. These being the only means of knowledge of intellectual phenomena, the illusory psychology, which is the last phase of theology, is excluded. It pretends to accomplish the discovery of the laws of the human mind by contemplating it in itself; that is, by separating it from causes and effects. Such an attempt, made in defiance of the physiological study of our intellectual organs, and of the observation of rational methods of procedure, cannot succeed at this time of day.

The Positive Philosophy, which has been rising since the time of Bacon, has now secured such a preponderance, that the metaphysicians themselves profess to ground their pretended science on an observation of facts. They talk of external and internal facts, and say that their business is with the latter. This is much like saying that vision is explained by luminous objects painting their images upon the retina. To this the physiologists reply that another eye would be needed to see the image. In the same manner, the mind may observe all phenomena but its own. It may be said that a man's intellect may observe his passions, the seat of the reason being somewhat apart from that of the emotions in the brain; but there can be nothing like scientific observation of the passions, except from without, as the stir of the emotions disturbs the observing faculties more or less. It is yet more out of the question to make an intellectual observation of intellectual processes. The observing and observed organ are here the same, and its action cannot be pure and natural. In order to observe, your intellect must pause from activity; yet it is this very activity that you want to observe. If you cannot effect the pause, you cannot observe: if you do effect it, there is nothing to observe. The results of such a method are in proportion to its absurdity. After two thousand years of psychological pursuit, no one proposition is established to the satisfaction of its followers. They are divided, to this day, into a multitude of schools, still disputing about the very elements of their doctrine. This interior observation gives birth to almost as many theories as there are observers. We ask in vain for any one discovery, great or small, which has been made under this method. The psychologists have done some good in keeping up the

activity of our understandings, when there was no better work for our faculties to do; and they may have added something to our stock of knowledge. If they have done so, it is by practicing the Positive method —by observing the progress of the human mind in the light of science; that is, by ceasing, for the moment, to be psychologists.

The view just given in relation to logical Science becomes yet more striking when we consider the logical Art.

The Positive Method can be judged of only in action. It cannot be looked at by itself, apart from the work on which it is employed. At all events, such a contemplation would be only a dead study, which could produce nothing in the mind which loses time upon it. We may talk forever about the method, and state it in terms very wisely, without knowing half so much about it as the man who has once put it in practice upon a single particular of actual research, even without any philosophical intention. Thus it is that psychologists, by dint of reading the precepts of Bacon and the discourses of Descartes, have mistaken their own dreams for science.

Without saying whether it will ever be possible to establish *a priori* a true method of investigation, independent of a philosophical study of the sciences, it is clear that the thing has never been done yet, and that we are not capable of doing it now. We cannot as yet explain the great logical procedures, apart from their applications. If we ever do, it will remain as necessary then as now to form good intellectual habits by studying the regular application of the scientific methods which we shall have attained.

This, then, is the first great result of the Positive Philosophy—the manifestation by experiment of the laws which rule the Intellect in the investigation of truth; and, as a consequence the knowledge of the general rules suitable for that object.

II. The second effect of the Positive Philosophy, an effect not less important and far more urgently wanted, will be to regenerate Education.

The best minds are agreed that our European education, still essentially theological, metaphysical, and literary, must be superseded by a Positive training, conformable to our time and needs. Even the governments of our day have shared, where they have not originated, the attempts to establish positive instruction; and this is a striking indication of the prevalent sense of what is wanted. While encouraging such endeavours to the utmost, we must not, however, conceal from

ourselves that everything yet done is inadequate to the object. The present exclusive specialty of our pursuits, and the consequent isolation of the sciences, spoil our teaching. If any student desires to form an idea of natural philosophy as a whole, he is compelled to go through each department as it is now taught, as if he were to be only an astronomer, or only a chemist; so that, be his intellect what it may, his training must remain very imperfect. And yet his object requires that he should obtain general positive conceptions of all the classes of natural phenomena. It is such an aggregate of conceptions, whether on a great or on a small scale, which must henceforth be the permanent basis of all human combinations. It will constitute the mind of future generations. In order to this regeneration of our intellectual system, it is necessary that the sciences, considered as branches from one trunk, should yield us, as a whole, their chief methods and their most important results. The specialties of science can be pursued by those whose vocation lies in that direction. They are indispensable; and they are not likely to be neglected; but they can never of themselves renovate our system of Education; and, to be of their full use, they must rest upon the basis of that general instruction which is a direct result of the Positive Philosophy.

III. The same special study of scientific generalities must also aid the progress of the respective positive sciences: and this constitutes our third head of advantages.

The divisions which we establish between the sciences are, though not arbitrary, essentially artificial. The subject of our researches is one: we divide it for our convenience, in order to deal the more easily with its difficulties. But it sometimes happens—and especially with the most important doctrines of each science—that we need what we cannot obtain under the present isolation of the sciences,—a combination of several special points of view; and for want of this, very important problems wait for their solution much longer than they otherwise need do. To go back into the past for an example: Descartes' grand conception with regard to analytical geometry is a discovery which has changed the whole aspect of mathematical science, and yielded the germ of all future progress; and it issued from the union of two sciences which had always before been separately regarded and pursued. The case of pending questions is yet more impressive; as, for instance, in Chemistry, the doctrine of Definite Proportions. Without entering upon the discussion of the fundamental principle of this theory, we may say with

assurance that, in order to determine it—in order to determine whether it is a law of nature that atoms should necessarily combine in fixed numbers,—it will be indispensable that the chemical point of view should be united with the physiological. The failure of the theory with regard to organic bodies indicates that the cause of this immense exception must be investigated, and such an inquiry belongs as much to physiology as to chemistry. Again, it is as yet undecided whether azote is a simple or a compound body. It was concluded by almost all chemists that azote is a simple body; the illustrious Berzelius hesitated, on purely chemical considerations; but he was also influenced by the physiological observation that animals which receive no azote in their food have as much of it in their tissues as carnivorous animals. From this we see how physiology must unite with chemistry to inform us whether azote is simple or compound, and to institute a new series of researches upon the relation between the composition of living bodies and their mode of alimentation.

Such is the advantage which, in the third place, we shall owe to Positive philosophy—the elucidation of the respective sciences by their combination. In the fourth place

IV. The Positive Philosophy offers the only solid basis for that Social Reorganization which must succeed the critical condition in which the most civilized nations are now living.

It cannot be necessary to prove to anybody who reads this work that Ideas govern the world, or throw it into chaos; in other words, that all social mechanism rests upon Opinions. The great political and moral crisis that societies are now undergoing is shown by a rigid analysis to arise out of intellectual anarchy. While stability in fundamental maxims is the first condition of genuine social order, we are suffering under an utter disagreement which may be called universal. Till a certain number of general ideas can be acknowledged as a rallying-point of social doctrine, the nations will remain in a revolutionary state, whatever palliatives may be devised; and their institutions can be only provisional. But whenever the necessary agreement on first principles can be obtained, appropriate institutions will issue from them, without shock or resistance; for the causes of disorder will have been arrested by the mere fact of the agreement. It is in this direction that those must look who desire a natural and regular, a normal state of society.

Now, the existing disorder is abundantly accounted for by the existence, all at once, of three incompatible philosophies,—the theo-

logical, the metaphysical, and the positive. Any one of these might alone secure some sort of social order; but while the three co-exist, it is impossible for us to understand one another upon any essential point whatever. If this is true, we have only to ascertain which of the philosophies must, in the nature of things, prevail; and, this ascertained, every man, whatever may have been his former views, cannot but concur in its triumph. The problem once recognized cannot remain long unsolved; for all considerations whatever point to the Positive Philosophy as the one destined to prevail. It alone has been advancing during a course of centuries, throughout which the others have been declining. The fact is incontestable. Some may deplore it, but none can destroy it, nor therefore neglect it but under penalty of being betrayed by illusory speculations. This general revolution of the human mind is nearly accomplished. We have only to complete the Positive Philosophy by bringing Social phenomena within its comprehension, and afterwards consolidating the whole into one body of homogeneous doctrine. The marked preference which almost all minds, from the highest to the commonest, accord to positive knowledge over vague and mystical conceptions, is a pledge of what the reception of this philosophy will be when it has acquired the only quality that it now wants—a character of due generality. When it has become complete, its supremacy will take place spontaneously, and will re-establish order throughout society. There is, at present, no conflict but between the theological and the metaphysical philosophies. They are contending for the task of reorganizing society; but it is a work too mighty for either of them. The positive philosophy has hitherto intervened only to examine both, and both are abundantly discredited by the process. It is time now to be doing something more effective, without wasting our forces in needless controversy. It is time to complete the vast intellectual operation begun by Bacon, Descartes, and Galileo, by constructing the system of general ideas which must henceforth prevail among the human race. This is the way to put an end to the revolutionary crisis which is tormenting the civilized nations of the world.

Leaving these four points of advantage, we must attend to one precautionary reflection.

Because it is proposed to consolidate the whole of our acquired knowledge into one body of homogeneous doctrine, it must not be supposed that we are going to study this vast variety as proceeding from a single principle, and as subjected to a single law. There is something

so chimerical in attempts at universal explanation by a single law, that it may be as well to secure this Work at once from any imputation of the kind, though its development will show how undeserved such an imputation would be. Our intellectual resources are too narrow, and the universe is too complex, to leave any hope that it will ever be within our power to carry scientific perfection to its last degree of simplicity. Moreover, it appears as if the value of such an attainment, supposing it possible, were greatly overrated. The only way, for instance, in which we could achieve the business, would be by connecting all natural phenomena with the most general law we know,—which is that of Gravitation, by which astronomical phenomena are already connected with a portion of terrestrial physics. Laplace has indicated that chemical phenomena may be regarded as simple atomic effects of the Newtonian attraction, modified by the form and mutual position of the atoms. But supposing this view provable (which it cannot be while we are without data about the constitution of bodies), the difficulty of its application would doubtless be found so great that we must still maintain the existing division between astronomy and chemistry, with the difference that we now regard as natural that division which we should then call artificial. Laplace himself presented this idea only as a philosophic device, incapable of exercising any useful influence over the progress of chemical science. Moreover, supposing this insuperable difficulty overcome, we should be no nearer to scientific unity, since we then should still have to connect the whole of physiological phenomena with the same law, which certainly would not be the least difficult part of the enterprise. Yet, all things considered, the hypothesis we have glanced at would be the most favourable to the desired unity.

The consideration of all phenomena as referable to a single origin is by no means necessary to the systematic formation of science, any more than to the realization of the great and happy consequences that we anticipate from the positive philosophy. The only necessary unity is that of Method, which is already in great part established. As for the doctrine, it need not be one; it is enough that it should be homogeneous. It is, then, under the double aspect of unity of method and homogeneousness of doctrine that we shall consider the different classes of positive theories in this work. While pursuing the philosophical aim of all science, the lessening of the number of general laws requisite for the explanation of natural phenomena, we shall regard as presumptious every attempt, in all future time, to reduce them rigorously to one.

CHEMISTRY

THE CHEMISTRY of the eighteenth century had put the science on the road to development by the discovery of many of the gases, some inkling of the permanence of matter, and the true theory in general of combustion and respiration. The great step made in the first third of the nineteenth century was the scientific development of the atomic theory.

The theory first suggested itself to Dalton about 1804, while experimenting on marsh gas and olefiant gas. He noted that marsh gas seemed to contain exactly twice the weight of hydrogen combined in olefiant gas: also that carbonic acid gas seemed to contain just twice as much oxygen as carbonic oxide gas. To explain these facts he went back to the old idea of the atom—that matter is composed of indivisible atoms with definite weights, the ratio of which to the weight of an atom of hydrogen could be expressed by definite numbers. The weight of the smallest particle of a compound, then, would be equal to the sum of the weights of the atoms composing it. Dalton's new theory was given to the world in Thomson's *System of Chemistry,* 1807.

The next step in the theory was made by Gay-Lussac in 1808. This was that a definite volume of oxygen combines with just twice its bulk of hydrogen, and in fact, that there always exists a simple relation between the volumes of gases that combine with each other and that the volume of the compound bears, also, a simple relation to the amount of gas of which the less is used. Thus, three volumes of hydrogen combining with one of nitrogen make two of ammonia; or one of chlorine with one of hydrogen makes two of hydrochloric acid gas. Therefore,

Dalton's law of definite proportions holds good in regard to volumes as well as weights.

The third step in the argument was made by Avogadro in 1811. Noting that variations in temperature and pressure affect the volume of all gases the same, and taking into consideration the laws of Dalton and Gay-Lussac, Avogadro argued that gases must always be so constituted that the number of molecules in any given volume of any gas, whether simple or compound, must be exactly the same for the same temperature and pressure. This law was not at first accepted, but has won its right to be relied upon after long years of rigorous testing. It will be noted that it makes an important distinction between the atom and the molecule: thus the molecule of a simple gas might contain more than one atom of the same kind. This also makes the density of equal volumes of gases represent the relative weights of their atoms.

Still another law relating to atomic weights was discovered by Dulong and Petit in 1819. This is that an element's specific heat multiplied by its atomic weight is a constant result—about 6.25.

These great laws have probably been the most influential of any in chemistry. They have led to a knowledge of the atomic weights of the elements and of the constitution of compounds which would have been considered the most impossible dream by the chemists, great though they were, of the seventeenth century.

SIR HUMPHREY DAVY

Sir Humphrey Davy was born December 17, 1778, in Cornwall. In his childhood and youth he was remarkable for his literary tastes and retentive memory.

In 1794 he was apprenticed to a surgeon-apothecary at Penzance. When about nineteen he became much interested in chemistry. In 1799 he sought to prove the immateriality of heat by generating it from the friction of two pieces of ice under a receiver. In 1798 he had begun the superintendence of a pneumatic medical institution. This threw him among educated men and he was recommended to Count Rumford, who appointed him lecturer on chemistry at the new Royal Institution. Here

he won great fame as a lecturer in spite of his ungainly appearance. In 1806 he advanced a theory to partly explain electrolysis; in 1807 he used electrolysis to discover potassium and sodium; in 1808 he discovered magnesium and strontium; in 1809 he added chlorine to the simple elements.

He was knighted in 1812. He married the same year, and his work was suspended on account of an injury to one eye received while experimenting.

In 1815 he invented the miners' safety-lamp. He was made a baronet in 1818 and president of the Royal Society in 1820. He died at Geneva in 1829.

His discoveries of the new metals by electrolysis have had an enormous influence, and his safety-lamp has saved no one knows how many accidents and lives.

THE BAKERIAN LECTURE, ON SOME NEW PHENOMENA OF CHEMICAL CHANGES PRODUCED BY ELECTRICITY, PARTICULARLY THE DECOMPOSITION OF THE FIXED ALKALIES, AND THE EXHIBITION OF THE NEW SUBSTANCES WHICH CONSTITUTE THEIR BASES; AND ON THE GENERAL NATURE OF ALKALINE BODIES.

Read November 19, 1807.

I. *Introduction.*

In the Bakerian Lecture which I had the honour of presenting to the Royal Society last year, I described a number of decompositions and chemical changes produced in substances of known composition by electricity, and I ventured to conclude from the general principles on which the phenomena were capable of being explained, that the new methods of investigation promised to lead to a more intimate knowledge than had hitherto been obtained, concerning the true elements of bodies.

This conjecture, then sanctioned only by strong analogies, I am now happy to be able to support by some conclusive facts. In the course of a laborious experimental application of the powers of electro-chemical analysis, to bodies which have appeared simple when examined by common chemical agents, or which at least have never been decomposed, it has been my good fortune to obtain new and singular results.

Such of the series of experiments as are in a tolerably mature state, and capable of being arranged in a connected order, I shall detail in the following sections, particularly those which demonstrate the decomposition and composition of the fixed alkalies, and the production of the new and extraordinary bodies which constitute their bases.

In speaking of novel methods of investigation, I shall not fear to be minute. When the common means of chemical research have been employed, I shall mention only results. A historical detail of the progress of the investigation, of all the difficulties that occurred, and of the manner in which they were overcome, and of all the manipulations employed, would far exceed the limits assigned to this Lecture. It is proper to state, however, that when general facts are mentioned, they are such only as have been deduced from processes carefully performed and often repeated.

II. *On the Methods used for the Decomposition of the fixed Alkalies.*

The researches I had made on the decomposition of acids, and of alkaline and earthy neutral compounds, proved that the powers of electrical decomposition were proportional to the strength of the opposite electricities in the circuit, and to the conducting power and degree of concentration of the materials employed.

In the first attempts, that I made on the decomposition of the fixed alkalies, I acted upon aqueous solutions of potash and soda, saturated at common temperatures, by the highest electrical power I could command, and which was produced by a combination of Voltaic batteries belonging to the Royal Institution, containing 24 plates of copper and zinc of 12 inches square, 100 plates of 6 inches, and 150 of 4 inches square, charged with solutions of alum and nitrous acid; but in these cases, though there was a high intensity of action, the water of the solutions alone was affected, and hydrogen and oxygen disengaged with the production of much heat and violent effervescence.

The presence of water appearing thus to prevent any decomposition, I used potash in igneous fusion. By means of a stream of oxygen gas from a gasometer applied to the flame of a spirit lamp, which was thrown on a platina spoon containing potash, this alkali was kept for some minutes in a strong red heat, and in a state of perfect fluidity. The spoon was preserved in communication with the positive side of the battery of the power of 100 of 6 inches, highly charged; and the connection from the negative side was made by a platina wire.

By this arrangement some brilliant phenomena were produced.

The potash appeared a conductor in a high degree, and as long as the communication was preserved, a most intense light was exhibited at the negative wire, and a column of flame, which seemed to be owing to the development of combustible matter, arose from the point of contact.

When the order was changed, so that the platina spoon was made negative, a vivid and constant light appeared at the opposite point: there was no effect of inflammation round it; but aeriform globules, which inflamed in the atmosphere, rose through the potash.

The platina, as might have been expected, was considerably acted upon; and in the cases when it had been negative, in the highest degree.

The alkali was apparently dry in this experiment; and it seemed probable that the inflammable matter arose from its decomposition. The residual potash was unaltered; it contained indeed a number of dark grey metallic particles, but these proved to be derived from the platina.

I tried several experiments on the electrization of potash rendered fluid by heat, with the hopes of being able to collect the combustible matter, but without success; and I only attained my object by employing electricity as the common agent for fusion and decomposition.

Though potash, perfectly dried by ignition, is a non-conductor, yet it is rendered a conductor by a very slight addition of moisture, which does not perceptibly destroy its aggregation; and in this state it readily fuses and decomposes by strong electrical powers.

A small piece of pure potash, which had been exposed for a few seconds to the atmosphere, so as to give conducting power to the surface, was placed upon an insulated disc of platina, connected with the negative side of the battery of the power of 250 of 6 and 4, in a state of intense activity; and a platina wire, communicating with the positive side, was brought in contact with the upper surface of the alkali. The whole apparatus was in the open atmosphere.

Under these circumstances a vivid action was soon observed to take place. The potash began to fuse at both its points of electrization. There was a violent effervescence at the upper surface; at the lower, or negative surface, there was no liberation of elastic fluid; but small globules having a high metallic lustre, and being precisely similar in visible characters to quicksilver, appeared, some of which burnt with explosion and bright flame, as soon as they were formed, and others remained, and were merely tarnished, and finally covered by a white film which formed on their surfaces.

These globules, numerous experiments soon showed to be the sub-

stance I was in search of, and a peculiar inflammable principle the basis of potash. I found that the platina was in no way connected with the result, except as the medium for exhibiting the electrical powers of decomposition; and a substance of the same kind was produced when pieces of copper, silver, gold, plumbago, or even charcoal were employed for completing the circuit.

The phenomenon was independent of the presence of air; I found that it took place when the alkali was in the vacuum of an exhausted receiver.

The substance was likewise produced from potash fused by means of a lamp, in glass tubes confined by mercury, and furnished with hermetically inserted platina wires by which the electrical action was transmitted. But this operation could not be carried on for any considerable time; the glass was rapidly dissolved by the action of the alkali, and this substance soon penetrated through the body of the tube.

Soda, when acted upon in the same manner as potash, exhibited an analogous result; but the decomposition demanded greater intensity of action in the batteries, or the alkali was required to be in much thinner and smaller pieces. With the battery of 100 of 6 inches in full activity I obtained good results from pieces of potash weighing from 40 to 70 grains, and of a thickness which made the distance of the electrified metallic surfaces nearly a quarter of an inch; but with a similar power it was impossible to produce the effects of decomposition on pieces of soda of more than 15 or 20 grains in weight, and that only when the distance between the wires was about 1-8 or 1-10 of an inch.

The substance produced from potash remained fluid at the temperature of the atmosphere at the time of its production; that from soda, which was fluid in the degree of heat of the alkali during its formation, became solid on cooling, and appeared having the lustre of silver.

When the power of 250 was used, with a very high charge for the decomposition of soda, the globules often burnt at the moment of their formation, and sometimes violently exploded and separated into smaller globules, which flew with great velocity through the air in a state of vivid combustion, producing a beautiful effect of continued jets of fire.

III. *Theory of the Decomposition of the fixed Alkalies; their Composition, and Production.*

As in all decompositions of compound substances which I had previously examined, at the same time that combustible bases were developed at the negative surface in the electrical circuit, oxygen was

produced, and evolved or carried into combination at the positive surface, it was reasonable to conclude that this substance was generated in a similar manner by the electrical action upon the alkalies; and a number of experiments made above mercury, with the apparatus for excluding external air, proved that this was the case.

When solid potash, or soda in its conducting state, was included in glass tubes furnished with electrified platina wires, the new substances were generated at the negative surfaces; the gas given out at the other surface proved by the most delicate examination to be pure oxygen; and unless an excess of water was present, no gas was evolved from the negative surface.

In the synthetical experiments, a perfect coincidence likewise will be found.

I mentioned that the metallic lustre of the substance from potash immediately became destroyed in the atmosphere, and that a white crust formed upon it. This crust I soon found to be pure potash, which immediately deliquesced, and new quantities were formed, which in their turn attracted moisture from the atmosphere till the whole globule disappeared, and assumed the form of a saturated solution of potash.

When globules were placed in appropriate tubes containing common air or oxygen gas confined by mercury, an absorption of oxygen took place; a crust of alkali instantly formed upon the globule; but from the want of moisture for its solution, the process stopped, the interior being defended from the action of the gas.

With the substance from soda, the appearances and effects were analogous.

When the substances were strongly heated, confined in given proportions of oxygen, a rapid combustion with a brilliant white flame was produced, and the metallic globules were found converted into a white and solid mass, which in the case of the substance from potash was found to be potash, and in the case of that from soda, soda.

Oxygen gas was absorbed in this operation, and nothing emitted which affected the purity of the residual air.

The alkalies produced were apparently dry, or at least contained no more moisture than might well be conceived to exist in the oxygen gas absorbed; and their weights considerably exceeded those of the combustible matters consumed.

The processes on which these conclusions are founded will be fully described hereafter, when the minute details which are necessary will

be explained, and the proportions of oxygen, and of the respective inflammable substances which enter into union to form the fixed alkalies, will be given.

It appears, then, that in these facts there is the same evidence for the decomposition of potash and soda into oxygen and two peculiar substances, as there is for the decomposition of sulphuric and phosphoric acids and the metallic oxides into oxygen and their respective combustible bases.

In the analytical experiments, no substances capable of decomposition are present but the alkalies and a minute portion of moisture; which seems in no other way essential to the result, than in rendering them conductors at the surface: for the new substances are not generated till the interior, which is dry, begins to be fused; they explode when in rising through the fused alkali they come in contact with the heated moistened surface; they cannot be produced from crystallized alkalies, which contain much water; and the effect produced by the electrization of ignited potash, which contains no sensible quantity of water, confirms the opinion of their formation independently of the presence of this substance.

The combustible bases of the fixed alkalies seem to be repelled as other combustible substances, by positively electrified surfaces, and attracted by negatively electrified surfaces, and the oxygen follows the contrary order; or the oxygen being naturally possessed of the negative energy, and the bases of the positive, do not remain in combination when either of them is brought into an electrical state opposite to its natural one. In the synthesis, on the contrary, the natural energies or attractions come in equilibrium with each other; and when these are in a low state at common temperatures, a slow combination is effected; but when they are exalted by heat, a rapid union is the result; and as in other like cases with the production of fire. A number of circumstances relating to the agencies of the bases of the alkalies will be immediately stated, and will be found to offer confirmations of these general conclusions.

JOHN DALTON

JOHN DALTON was born Sept. 5, 1766, in Cumberland, England, of a Quaker family. His father was a weaver and his mother helped support the family by selling stationery. He began to teach in school when twelve years old. From 1781 to 1785 he was assistant in his cousin's school at Kendal, and in 1785 he became joint master of the school with his brother. Discipline was strict, the masters were uncouth, and the school was far from popular. In 1793 he became teacher of mathematics and philosophy at New College, Manchester.

One of his first important papers (1794) was on the facts of color-blindness. Red, orange, yellow and green, all looked to him but different shades of what he would have called yellow.

In 1800 he began his investigations into the combination of gases. He noted that gases expand equally with the same pressure and heat in an essay before the Manchester Society in 1801. In 1803 and 1804 he was led from experiments to believe that gases combine with each other in definite proportions and adopted his atomic theory to explain that phenomenon. This theory is the most important in chemistry, and has been developed into one of the great laws of nature.

From 1805 until 1831 he lived quietly in Manchester with his friend, the Rev. W. Johns. He was given the King's medal of the Royal Society in 1822. In 1833 he was given a pension of $750; later, in 1836, raised to $1,500. He died July 26, 1844.

ON THE CONSTITUTION OF BODIES

There are three distinctions in the kinds of bodies, or three states, which have more especially claimed the attention of philosophical chemists; namely, those which are marked by the terms elastic fluids, liquids, and solids. A very familiar instance is exhibited to us in water, of a body which, in certain circumstances, is capable of assuming all the three states. In steam we recognize a perfectly elastic fluid, in water a

perfect liquid, and in ice a complete solid. These observations have tacitly led to the conclusion which seems universally adopted, that all bodies of sensible magnitude, whether liquid or solid, are constituted of a vast number of extremely small particles, or atoms of matter bound together by a force of attraction, which is more or less powerful according to circumstances, and which as it endeavours to prevent their separation, is very properly called in that view, attraction of cohesion; but as it collects them from a dispersed state (as from steam into water) it is called attraction of aggregation, or more simply, affinity. Whatever names it may go by, they still signify one and the same power. It is not my design to call in question this conclusion, which appears completely satisfactory; but to show that we have hitherto made no use of it, and that the consequence of the neglect has been a very obscure view of chemical agency, which is daily growing more so in proportion to the new lights attempted to be thrown upon it.

The opinions I more particularly allude to, are those of Berthollet on the Laws of chemical affinity; such as that chemical agency is proportional to the mass, and that in all chemical unions there exist insensible gradations in the proportions of the constituent principles. The inconsistence of these opinions, both with reason and observation, cannot, I think, fail to strike every one who takes a proper view of the phenomena.

Whether the ultimate particles of a body, such as water, are all alike, that is, of the same figure, weight, etc., is a question of some importance. From what is known, we have no reason to apprehend a diversity in these particulars: if it does exist in water, it must equally exist in the elements constituting water, namely, hydrogen and oxygen. Now it is scarcely possible to conceive how the aggregates of dissimilar particles should be so uniformly the same. If some of the particles of water were heavier than others, if a parcel of the liquid on any occasion were constituted principally of these heavier particles, it must be supposed to affect the specific gravity of the mass, a circumstance not known. Similar observations may be made on other substances. Therefore we may conclude that the ultimate particles of all homogeneous bodies are perfectly alike in weight, figure, etc. In other words, every particle of water is like every other particle of water; every particle of hydrogen is like every other particle of hydrogen, etc.

ON CHEMICAL SYNTHESIS

When any body exists in the elastic state, its ultimate particles are separated from each other to a much greater distance than in any other state; each particle occupies the centre of a comparatively large sphere, and supports its dignity by keeping all the rest, which by their gravity, or otherwise, are disposed to encroach upon it, at a respectful distance. When we attempt to conceive the number of particles in an atmosphere, it is somewhat like attempting to conceive the number of stars in the universe. We are confounded with the thought. But if we limit the subject, by taking a given volume of any gas, we seem persuaded that, let the divisions be ever so minute, the number of particles must be finite; just as in a given space of the universe, the number of stars and planets cannot be infinite.

Chemical analysis and synthesis go no farther than to the separation of particles one from another, and to their reunion. No new creation or destruction of matter is within the reach of chemical agency. We might as well attempt to introduce a new planet into the solar system, or to annihilate one already in eixstence, as to create or destroy a particle of hydrogen. All the changes we can produce, consist in separating particles that are in a state of cohesion or combination, and joining those that were previously at a distance.

In all chemical investigations it has justly been considered an important object to ascertain the relative weights of the simples which constitute a compound. But unfortunately the inquiry has terminated here; whereas from the relative weights in the mass, the relative weights of the ultimate particles or atoms of the bodies might have been inferred, from which their number and weight in various other compounds would appear, in order to assist and to guide future investigations, and to correct their results. Now it is one great object of this work to show the importance and advantage of ascertaining the relative weights of the ultimate particles, both of simple and compound bodies, the number of simple elementary particles which constitute one compound particle, and the number of less compound particles which enter into the formation of one more compound particle.

If there are two bodies, A and B, which are disposed to combine,

the following is the order in which the combinations may take place, beginning with the most simple: namely,

1 atom of A + 1 atom of B = 1 atom of C, binary.
1 atom of A + 2 atoms of B = 1 atom of D, ternary.
2 atoms of A + 1 atom of B = 1 atom of E, ternary.
1 atom of A + 3 atoms of B = 1 atom of F, quaternary.
3 atoms of A + 1 atom of B = 1 atom of G, quaternary.
etc., etc.

The following general rules may be adopted as guides in all our investigations respecting chemical synthesis:

1st. When only one combination of two bodies can be obtained, it must be presumed to be a binary one, unless some cause appear to the contrary.

2d. When two combinations are observed, they must be presumed to be a binary and a ternary.

3d. When three combinations are obtained, we may expect one to be a binary, and the other two ternary.

4th. When four combinations are observed, we should expect one binary, two ternary, and one quaternary, etc.

5th. A binary compound should always be specifically heavier than the mere mixture of its two ingredients.

6th. A ternary compound should be specifically heavier than the mixture of a binary and a simple, which would, if combined, constitute it; etc.

7th. The above rules and observations equally apply, when two bodies, such as C and D, D and E, etc., are combined.

From the application of these rules, to the chemical facts already well ascertained, we deduce the following conclusions; 1st. That water is a binary compound of hydrogen and oxygen, and the relative weights of the two elementary atoms are as 1 : 7, nearly; 2d. That ammonia is a binary compound of hydrogen and azote, and the relative weights of the two atoms are as 1 : 5, nearly; 3d. That nitrous gas is a binary compound of azote and oxygen, the atoms of which weigh 5 and 7 respectively; that nitric acid is a binary or ternary compound according as it is derived, and consists of one atom of azote and two of oxygen, together weighing 19; that nitrous oxide is a compound similar to nitric acid, and consists of one atom of oxygen and two of azote, weighing 17; that nitrous acid is a binary compound of nitric acid and nitrous gas, weighing 31; that oxynitric acid is a binary compound of nitric acid and oxygen, weighing 26; 4th. That carbonic oxide is a binary compound, consisting of one atom of charcoal, and one of oxygen, together weighing nearly 12; that carbonic acid is a ternary compound (but sometimes binary), consisting of one atom of charcoal, and two of

oxygen, weighing 19; etc., etc. In all these cases the weights are expressed in atoms of hydrogen, each of which is denoted by unity.

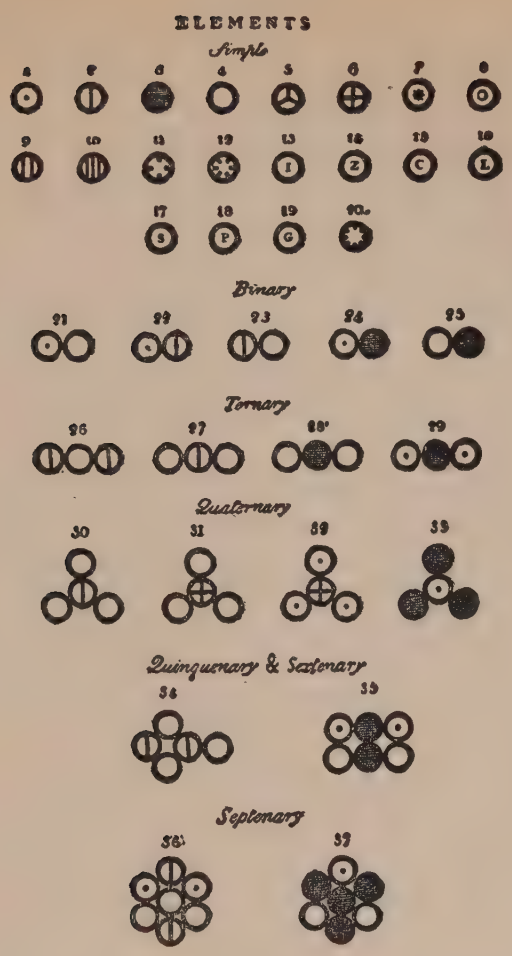
In the sequel, the facts and experiments from which these conclusions are derived, will be detailed; as well as a great variety of others from which are inferred the constitution and weight of the ultimate particles of the principal acids, the alkalies, the earths, the metals, the metallic oxides and sulphurets, the long train of neutral salts, and in short, all the chemical compounds which have hitherto obtained a tolerably good analysis. Several of the conclusions will be supported by original experiments.

From the novelty as well as importance of the ideas suggested in this chapter, it is deemed expedient to give plates, exhibiting the mode of combination in some of the more simple cases. A specimen of these accompanies this first part. The elements or atoms of such bodies as are conceived at present to be simple, are denoted by a small circle, with some distinctive mark; and the combinations consist in the juxtaposition of two or more of these; when three or more particles of elastic fluids are combined together in one, it is to be supposed that the particles of the same kind repel each other, and therefore take their stations accordingly.

This plate [on the following page] contains the arbitrary marks or signs chosen to represent the several chemical elements or ultimate particles.

Fig.		Fig.	
1	Hydrog. its rel. weight.. 1	11	Strontites 46
2	Azote 5	12	Barytes 68
3	Carbone or charcoal..... 5	13	Iron 38
4	Oxygen 7	14	Zinc 56
5	Phosphorus 9	15	Copper 56
6	Sulphur 13	16	Lead 95
7	Magnesia 20	17	Silver 100
8	Lime 23	18	Platina 100
9	Soda 28	19	Gold 140
10	Potash 42	20	Mercury 167

21. An atom of water or steam, composed of 1 of oxygen and 1 of hydrogen, retained in physical contact by a strong affinity, and supposed to be surrounded by a common atmosphere of heat; its relative weight = ... 8
22. An atom of ammonia, composed of 1 of azote and 1 of hydrogen 6
23. An atom of nitrous gas, composed of 1 of azote and 1 of oxygen 12
24. An atom of olefiant gas, composed of 1 of carbone and 1 of hydrogen 6



Fig,

25. An atom of carbonic oxide composed of 1 of carbone and 1 of oxygen 12
26. An atom of nitrous oxide, 2 azote + 1 oxygen ... 17
27. An atom of nitric acid, 1 azote + 2 oxygen ... 19
28. An atom of carbonic acid, 1 carbone + 2 oxygen ... 19
29. An atom of carburetted hydrogen, 1 carbone + 2 hydrogen ... 7
30. An atom of oxynitric acid, 1 azote + 3 oxygen ... 26
31. An atom of sulphuric acid, 1 sulphur + 3 oxygen ... 34
32. An atom of sulphuretted hydrogen, 1 sulphur + 3 hydrogen ... 16
33. An atom of alcohol, 3 carbone + 1 hydrogen ... 16
34. An atom of nitrous acid, 1 nitric acid + 1 nitrous gas ... 31
35. An atom of acetous acid, 2 carbone + 2 water ... 26
36. An atom of nitrate of ammonia, 1 nitric acid + 1 ammonia + 1 water 33
37. An atom of sugar, 1 alcohol + 1 carbonic acid ... 35

Enough has been given to show the method; it will be quite unnecessary to devise characters and combinations of them to exhibit to view in this way all the subjects that come under investigation; nor is it necessary to insist upon the accuracy of all these compounds, both in number and weight; the principle will be entered into more particularly hereafter, as far as respects the individual results. It is not to be understood that all those articles marked as simple substances, are necessarily such by the theory; they are only necessarily of such weights. Soda and potash, such as they are found in combination with acids, are 28 and 42 respectively in weight; but according to Mr. Davy's very important discoveries, they are metallic oxides; the former then must be considered as composed of an atom of metal, 21, and one of oxygen, 7; and the latter, of an atom of metal, 35, and one of oxygen, 7. Or, soda contains 75 per cent. metal and 25 oxygen; potash, 83.3 metal and 16.7 oxygen. It is particularly remarkable, that according to the abovementioned gentleman's essay on the Decomposition and Composition of the fixed alkalies, in the Philosophical Transactions (a copy of which essay he has just favoured me with) it appears that "the largest quantity of oxygen indicated by these experiments was for potash 17, and for soda, 26 parts in 100, and the smallest 13 and 19."

GAY-LUSSAC

Joseph Lewis Gay-Lussac was born at St. Léonard, France, Dec. 6, 1778. He was educated at home until 1794 and entered the Ecole Polytechnique at the end of 1797. Late in 1800 he was assigned to Berthollet as an assistant. It is said that he was scrupulously exact in recording the results of the experiments he made, and that Berthollet after looking over the results, which did not at all accord with his expectations, exclaimed, "My young man, it is your destiny to make discoveries for yourself. Hereafter be my associate. I wish to be your father in science and I am sure it is a title I shall some day be proud of."

Early in 1802 he seems to have noted that gases expand alike when heated from zero to 80 degrees. In 1804 he ascended 23,000 feet in a giant balloon in order to make experiments on temperature and magnetism. In 1805 he traveled in Italy and Germany. The next year he was admittted to membership in the Academy.

In 1809 he announced his law of multiple proportions that gases combine with each other by volumes in integral ratios, 1 to 1, 1 to 2, 2 to 3, and that the volume of the product also bears a simple relation to that of each constituent. This law was fiercely attacked for a time, but eventually won acceptance.

In 1810 and 1811 he was busy examining the constituttion of such organic substances as sugar, starch, wax, acetic acid, etc. During this time there was considerable rivalry between himself and Humphrey Davy, as both of them had been investigating along the same line in discovering boron, iodine, etc.

Most of the rest of his life was spent in researches in practical chemistry. He died May 9, 1850.

MEMOIR ON THE COMBINATION OF GASEOUS SUBSTANCES WITH EACH OTHER

By M. Gay-Lussac

Read before the Philomathic Society, 31st December, 1808.

Substances, whether in the solid, liquid, or gaseous state, possess

properties which are independent of the force of cohesion; but they also possess others which appear to be modified by this force (so variable in its intensity), and which no longer follow any regular law. The same pressure applied to all solid or liquid substances would produce a diminution of volume differing in each case, while it would be equal for all elastic fluids. Similarly, heat expands all substances; but the dilations of liquids and solids have hitherto presented no regularity, and it is only those of elastic fluids which are equal and independent of the nature of each gas. The attraction of the molecules in solids and liquids is, therefore, the cause which modifies their special properties; and it appears that it is only when the attraction is entirely destroyed, as in gases, that bodies under similar conditions obey simple and regular laws. At least, it is my intention to make known some new properties in gases, the effects of which are regular, by showing that these substances combine amongst themselves in very simple proportions, and that the contraction of volume which they experience on combination also follows a regular law. I hope by this means to give a proof of an idea advanced by several very distinguished chemists—that we are perhaps not far removed from the time when we shall be able to submit the bulk of chemical phenomena to calculation.

It is a very important question in itself, and one much discussed among chemists, to ascertain if compounds are formed in all sorts of proportions. M. Proust, who appears first to have fixed his attention on this subject, is of opinion that the metals are susceptible of only two degrees of oxidation, a minimum and a maximum; but led away by this seductive theory, he has seen himself forced to entertain principles contrary to physics in order to reduce to two oxides all those which the same metal sometimes presents. M. Berthollet thinks, on the other hand—reasoning from general considerations and his own experiments—that compounds are always formed in very variable proportions, unless they are determined by special causes, such as crystallization, insolubility, or elasticity. Lastly, Dalton has advanced the idea that compounds of two bodies are formed in such a way that one atom of the one unites with one, two, three, or more atoms of the other. It would follow from this mode of looking at compounds that they are formed in constant proportions, the existence of intermediate bodies being excluded, and in this respect Dalton's theory would resemble that of M. Proust; but M. Berthollet has already strongly opposed it in the Introduction he has written to Thomson's Chemistry, and we shall see that in reality it is

not entirely exact. Such is the state of the question now under discussion; it is still very far from receiving its solution, but I hope that the facts which I now proceed to set forth, facts which had entirely escaped the notice of chemists, will contribute to its elucidation.

Suspecting, from the exact ratio of 100 of oxygen to 200 of hydrogen, which M. Humboldt and I had determined for the proportions of water, that other gases might also combine in simple ratios, I have made the following experiments: I prepared fluoboric, muriatic, and carbonic gases, and made them combine successively with ammonia gas. One hundred parts of muriatic gas saturate precisely 100 parts of ammonia gas, and the salt which is formed from them is perfectly neutral, whether one or other of the gases is in excess. Fluoboric gas, on the contrary, unites in two proportions with ammonia gas. When the acid gas is put first into the graduated tube, and the other gas is then passed in, it is found that equal volumes of the two condense, and that the salt formed is neutral. But if we begin by first putting the ammonia gas into the tube, and then admitting the fluoboric gas in single bubbles, the first gas will then be in excess with regard to the second, and there will result a salt with excess of base, composed of 100 of fluoboric gas and 200 of ammonia gas. If carbonic gas is brought into contact with ammonia gas, by passing it sometimes first, sometimes second into the tube, there is always formed a sub-carbonate composed of 100 parts of carbonic gas and 200 of ammonia gas. It may, however, be proved that neutral carbonate of ammonia would be composed of equal volumes of each of these components. M. Berthollet, who has analyzed this salt, obtained by passing carbonic gas into the sub-carbonate, found that it was composed of 73.34 parts by weight of carbonic gas and 26.66 of ammonia gas. Now, if we suppose it to be composed of equal volumes of its components, we find from their known specific gravity, that it contains by weight

71.81 of carbonic acid,
28.19 of ammonia,

100.0

a proportion differing only slightly from the preceding.

If the neutral carbonate of ammonia could be formed by the mixture of carbonic gas and ammonia gas, as much of one gas as of the other would be absorbed; and since we can only obtain it through the intervention of water, we must conclude that it is the affinity of this liquid which competes with that of the ammonia to overcome the elas-

ticity of the carbonic acid, and that the neutral carbonate of ammonia can only exist through the medium of water.

Thus we may conclude that muriatic, fluoboric, and carbonic acids take exactly their own volume of ammonia gas to form neutral salts, and that the last two take twice as much to form sub-salts. It is very remarkable to see acids so different from one another neutralize a volume of ammonia gas equal to their own; and from this we may suspect that if all acids and all alkalies could be obtained in the gaseous state, neutrality would result from the combination of equal volumes of acid and alkali.

It is not less remarkable that, whether we obtain a neutral salt or a sub-salt, their elements combine in simple ratios which may be considered as limits to their proportions. Accordingly, if we accept the specific gravity of muriatic acid determined by M. Biot and myself, and those of carbonic gas and ammonia given by MM. Biot and Arago, we find that dry muriate of ammonia is composed of

Ammonia,	100.0	or	38.35
Muriatic acid,	160.7		61.65
			100.00

a proportion very far from that of M. Berthollet—

100 of ammonia,
213 of acid.

In the same way, we find that sub-carbonate of ammonia contains

Ammonia,	100.0	or	43.98
Carbonic acid,	127.3		56.02
			100.00

and the neutral carbonate

Ammonia,	100.0	or	28.19
Carbonic acid,	254.6		71.81
			100.00

It is easy from the preceding results to ascertain the ratios of the capacity of fluoboric, muriatic, and carbonic acids; for since these three gases saturate the same volume of ammonia gas, their relative capacities will be inversely as their densities, allowance having been made for the water contained in muriatic acid.

We might even now conclude that gases combine with each other in very simple ratios; but I shall still give some fresh proofs.

According to the experiments of M. Amédée Berthollet, ammonia is composed of

100 of nitrogen,
300 of hydrogen,

by volume.

I have found (1st vol. of the Société d'Arcueil) that sulphuric acid is composed of

100 of sulphurous gas,
50 of oxygen gas.

When a mixture of 50 parts of oxygen and 100 of carbonic oxide (formed by the distillation of oxide of zinc with strongly calcined charcoal) is inflamed, these two gases are destroyed and their place taken by 100 parts of carbonic acid gas. Consequently carbonic acid may be considered as being composed of

100 of carbonic oxide gas,
50 of oxygen gas.

Davy, from the analysis of various compounds of nitrogen with oxygen, has found the following proportions by weight:—

	Nitrogen.	Oxygen.
Nitrous oxide	63.30	36.70
Nitrous gas	44.05	55.95
Nitric acid	29.50	70.50

Reducing these proportions to volumes we find—

	Nitrogen.	Oxygen.
Nitrous oxide	100	49.5
Nitrous gas	100	108.9
Nitric acid	100	204.7

The first and the last of these proportions differ only slightly from 100 to 50, and 100 to 200; it is only the second which diverges somewhat from 100 to 100. The difference, however, is not very great, and is such as we might expect in experiments of this sort; and I have assured myself that it is actually nil. On burning the new combustible substance from potash in 100 parts by volume of nitrous gas, there remained over exactly 50 parts of nitrogen, the weight of which, deducted from that of the nitrous gas (determined with great care by M. Bérard at Arcueil), yields as result that this gas is composed of equal parts by volume of nitrogen and oxygen.

We may then admit the following numbers for the proportions by volume of the compounds of nitrogen with oxygen:—

	Nitrogen.	Oxygen.
Nitrous oxide	100	50
Nitrous gas	100	100
Nitric acid	100	200

From my experiments, which differ very little from those of M. Chenevix, oxygenated muriatic acid is composed by weight of

Oxygen	22.92
Muriatic acid	77.08

Converting these quantities into volumes, we find that oxygenated muriatic acid is formed of

Muriatic gas	300.2
Oxygen gas	103.2

a proportion very nearly

Muriatic gas	300
Oxygen gas	100

Thus it appears evident to me that gases always combine in the simplest proportions when they act on one another; and we have seen in reality in all the preceding examples that the ratio of combination is 1 to 1, 1 to 2, or 1 to 3. It is very important to observe that in considering weights there is no simple and finite relation between the elements of any one compound; it is only when there is a second compound between the same elements that the new proportion of the element that has been added is a multiple of the first quantity. Gases, on the contrary, in whatever proportions they may combine, always give rise to compounds whose elements by volume are multiples of each other.

Not only, however, do gases combine in very simple proportions, as we have just seen, but the apparent contraction of volume which they experience on combination has also a simple relation to the volume of the gases, or at least to that of one of them.

I have said, following M. Berthollet, that 100 parts of carbonic oxide gas, prepared by distilling oxide of zinc and strongly calcined charcoal, produce 100 parts of carbonic gas on combining with 50 of oxygen. It follows from this that the apparent contraction of the two gases is precisely equal to the volume of oxygen gas added. The density of carbonic gas is thus equal to that of carbonic oxide gas plus half the density of oxygen gas; or, conversely, the density of carbonic oxide gas is equal to that of carbonic gas, minus half that of oxygen gas. Accordingly, taking the density of air as unity, we find the density of carbonic oxide gas to be 0.9678, instead of 0.9569 experimentally determined by Cruickshanks. We know, besides, that a given volume of oxygen produces an equal volume of carbonic acid; consequently oxygen gas doubles its volume on forming carbonic oxide gas with carbon, and so does carbonic gas on being passed over red-hot charcoal. Since oxygen produces an equal volume of carbonic gas, and the density of the

latter is well known, it is easy to calculate the proportion of its elements. In this way we find that carbonic gas is composed of

27.38 of carbon,
72.62 of oxygen,

and carbonic oxide of

42.99 of carbon,
57.01 of oxygen.

Pursuing a similar course, we find that if sulphur takes 100 parts of oxygen to produce sulphurous acid, it takes 150 parts to produce sulphuric acid. As a matter of fact, we find that sulphuric acid, according to the experiments of MM. Klaproth, Bucholz, and Richter, is composed of 100 parts by weight of sulphur and 138 of oxygen.

On the other hand sulphuric acid is composed of 2 parts by volume of sulphurous gas, and 1 of oxygen gas. Consequently the weight of a certain quantity of sulphuric acid should be the same as that of 2 parts of sulphurous acid and 1 of oxygen gas, i. e., 2×2.265, plus 1.10359= 5.63359; seeing that, according to Kirwan, sulphurous gas weighs 2.265, the density of air being taken as unity. But from the proportion of 100 of sulphur to 138 of oxygen, this quantity contains 3.26653 of oxygen, and if we subtract from it 1.10359 there will remain 2.16294 for the weight of oxygen in 2 parts of sulphurous acid, or 1.08147 for the weight of oxygen contained in 1 part.

Now as this last quantity only differs by 2 per cent. from 1.10359, which represents the weight of 1 part of oxygen gas, it must be concluded that oxygen gas, in combining with sulphur to form sulphurous gas, only experiences a diminution of a fiftieth of its volume, and this would probably be nil if the data I have employed were more exact. On this last supposition, using Kirwan's value for the specific gravity of sulphurous gas, we should find that this acid is composed of

100.00 of sulphur,
95.02 of oxygen.

But if, adopting the preceding proportions for sulphuric acid, we allow, as appears probable, that 100 of sulphurous gas contain 100 of oxygen gas, and that 50 have still to be added to convert it into sulphuric acid, we shall obtain for the proportions in sulphurous acid

100.00 of sulphur,
92.0 of oxygen.

Its specific gravity calculated on the same suppositions, and referred to that of air, would be 2.30314, instead of 2.2650 as Kirwan found directly.

Phosphorus is very closely connected with sulphur, seeing that both have nearly the same specific gravity. Consequently phosphorus should take up twice as much oxygen to become phosphorous acid, as to pass from this state into phosphoric acid. Since the latter is composed, according to Rose, of

100.0 of phosphorus,
114.0 of oxygen,

it follows that phosphorous acid should contain

100.0 of phosphorus,
76.0 of oxygen.

We have seen that 100 parts of nitrogen gas take 50 parts of oxygen gas to form nitrous oxide, and 100 of oxygen gas to form nitrous gas. In the first case, the contraction is a little greater than the volume of oxygen added; for the specific gravity of nitrous oxide, calculated on this hypothesis, is 1.52092, while that given by Davy is 1.61414. But it is easy to show, from some of Davy's experiments, that the apparent contraction is precisely equal to the volume of oxygen gas added. On passing the electric spark through a mixture of 100 parts of hydrogen and 97.5 of nitrous oxide the hydrogen is destroyed, and 102 parts of nitrogen remain, including that quantity which is almost always mixed with the hydrogen, and a little of the latter gas which has escaped combustion. The residue, after making all corrections, would be very nearly equal in volume to the nitrous oxide employed. Similarly, on passing the electric spark through a mixture of 100 parts of phosphuretted hydrogen and 250 of nitrous oxide, water and phosphoric acid are formed, and exactly 250 parts of nitrogen remain,—another evident proof that the apparent contraction of the elements of nitrous oxide is equal to the whole volume of oxygen added. From this circumstance, its specific gravity referred to that of air should be 1.52092.

The apparent contraction of the elements of nitrous gas appears, on the other hand, to be nil. If we admit, as I have shown, that it is composed of equal parts of oxygen and nitrogen, we find that its density, calculated on the assumption that there is no contraction, is 1.036, while that determined directly is 1.038.

Saussure found that the density of water vapour is to that of air as 10 is to 14. Assuming that the contraction of volume of the two gases is only equal to the whole volume of oxygen added, we find instead of this a ratio of 10 to 16. This difference, and the authority of a physicist so distinguished as Saussure, would seem to be enough to make us reject

the assumption I have just made; but I shall mention several circumstances that render it very probable. Firstly, it has a very strong analogy in its favour; secondly, M. Tralès found by direct experiment that the ratio of the density of water-vapour to air is 10 to 14.5, instead of 10 to 14; thirdly, although we do not know very exactly the volume occupied by water on passing into the elastic state, we do know, from the experiments of Watt, that a cubic inch of water produces nearly a cubic foot of steam, i. e., a volume 1728 times as great. Now, adopting Saussure's ratio, we find only 1488 for the volume occupied by water when it is converted into steam; but adopting the ratio of 10 to 16, we should have 1700.6. Finally, the refraction of water-vapour, calculated on the assumption of the ratio 10 to 14, is a little greater than the observed refraction; but that calculated from the ratio 10 to 16 is much more in harmony with the results of experiment. These, then, are the considerations which go to make the ratio 10 to 16 very probable.

Ammonia gas is composed of three parts by volume of hydrogen and one of nitrogen, and its density compared to air is 0.596. But if we suppose the apparent contraction to be half of the whole volume, we find 0.594 for the density. Thus it is proved, by this almost perfect concordance, that the apparent contraction of its elements is precisely half the total volume, or rather double the volume of nitrogen.

I have already proved that oxygenated muriatic gas is composed of 300 parts of muriatic gas and 100 of oxygen gas. Admitting that the apparent contraction of the two gases is half the whole volume, we find 2.468 for its density, and by experiment 2.470. I have also assured myself by several experiments that the proportions of its elements are such that it forms neutral salts with the metals. For example, if we pass oxygenated muriatic gas over copper, there is formed a slightly acid green muriate, and a little oxide of copper is precipitated, because the salt cannot be obtained perfectly neutral. It follows from this that in all the muriates, as in oxygenated muriatic acid, the acid reduced to volume is thrice the oxygen. It would be the same for carbonates and fluorides, the acids of which have for equal volumes the same saturation capacity as muriatic acid.

We see, then, from these various examples, that the contraction experienced by two gases on combination is in almost exact relation with their volume, or rather with the volume of one of them. Only very slight differences exist between the densities of compounds obtained by calculation and those given by experiment, and it is probable that, on undertaking new researches, we shall see them vanish entirely.

AVOGADRO

Amadeo Avogadro was born in Turin, Italy, August 9, 1776. He studied law at the Turin University and received his doctor's degree in 1796. For the next ten years he was in the government employ. He did not begin his scientific work until 1806. In 1809 he was made professor of physics at Vercelli.

After considering the recently discovered laws that all gases expand alike for like temperature and pressure, that they combine in definite multiple proportions by volume and weight to make a definite volume of the compound, he advanced the theory that this could occur only if the molecules of all gases are the same distance apart for the same temperature and pressure, that is, that the same volume, under like conditions, always contains the same number of molecules. It was long before this law was accepted, but half a century later its truth became pretty well acknowledged. The law, of course, implies that the weights of the same volume of two gases are in the same relation as their molecular weights.

In 1820 he became professor of physics at Turin University. He died July 9, 1865.

A still further extension of the atomic theory was made by Pierre Louis Dulong. Dulong was born at Rouen, France, February 12, 1785. He was one of Berthollet's pupils. In 1813 with Petit he discovered that elementary atoms have the same capacity for heat in proportion to their atomic weights. Dulong died in 1838. Thus by the labors of Dalton, Gay-Lussac, Avogadro, and Dulong, the greatest theory of chemistry and one of the greatest of all the natural sciences was developed and established.

THE MOLECULES IN GASES PROPORTIONAL TO THE VOLUMES

I.

M. Gay-Lussac has shown in an interesting Memoir (Mémoires de la Société d'Arcueil, Tome II.) that gases always unite in a very simple

proportion by volume, and that when the result of the union is a gas, its volume also is very simply related to those of its components. But the quantitative proportions of substances in compounds seem only to depend on the relative number of molecules which combine, and on the number of composite molecules which result. It must then be admitted that very simple relations also exist between the volumes of gaseous substances and the numbers of simple or compound molecules which form them. The first hypothesis to present itself in this connection, and apparently even the only admissible one, is the supposition that the number of integral molecules in any gases is always the same for equal volumes, or always proportional to the volumes. Indeed, if we were to suppose that the number of molecules contained in a given volume were different for different gases, it would scarcely be possible to conceive that the law regulating the distance of molecules could give in all cases relations so simple as those which the facts just detailed compel us to acknowledge between the volume and the number of molecules. On the other hand, it is very well conceivable that the molecules of gases being at such a distance that their mutual attraction cannot be exercised, their varying attraction for caloric may be limited to condensing a greater or smaller quantity around them, without the atmosphere formed by this fluid having any greater extent in the one case than in the other, and, consequently, without the distance between the molecules varying; or, in other words, without the number of molecules contained in a given volume being different. Dalton, it is true, has proposed a hypothesis directly opposed to this, namely, that the quantity of caloric is always the same for the molecules of all bodies whatsoever in the gaseous state, and that the greater or less attraction for caloric only results in producing a greater or less condensation of this quantity around the molecules, and thus varying the distance between the molecules themselves. But in our present ignorance of the manner in which this attraction of the molecules for caloric is exerted, there is nothing to decide us *a priori* in favour of the one of these hypotheses rather than the other; and we should rather be inclined to adopt a neutral hypothesis, which would make the distance between the molecules and the quantites of caloric vary according to unknown laws, were it not that the hypothesis we have just proposed is based on that simplicity of relation between the volumes of gases on combination, which would appear to be otherwise inexplicable.

Setting out from this hypothesis, it is apparent that we have the

means of determining very easily the relative masses of the molecules of substances obtainable in the gaseous state, and the relative number of these molecules in compounds; for the ratios of the masses of the molecules are then the same as those of the densities of the different gases at equal temperature and pressure, and the relative number of molecules in a compound is given at once by the ratio of the volumes of the gases that form it. For example, since the numbers 1.10359 and 0.07321 express the densities of the two gases oxygen and hydrogen compared to that of atmospheric air as unity, and the ratio of the two numbers consequently represents the ratio between the masses of equal volumes of these two gases, it will also represent on our hypothesis the ratio of the masses of their molecules. Thus the mass of the molecule of oxygen will be about 15 times that of the molecule of hydrogen, or, more exactly, as 15.074 to 1. In the same way the mass of the molecule of nitrogen will be to that of hydrogen as 0.96913 to 0.07321, that is, as 13, or more exactly 13.238, to 1. On the other hand, since we know that the ratio of the volumes of hydrogen and oxygen in the formation of water is 2 to 1, it follows that water results from the union of each molecule of oxygen with two molecules of hydrogen. Similarly, according to the proportions by volume established by M. Gay-Lussac for the elements of ammonia, nitrous oxide, nitrous gas, and nitric acid, ammonia will result from the union of one molecule of nitrogen with three of hydrogen, nitrous oxide from one molecule of oxygen with two of nitrogen, nitrous gas from one molecule of nitrogen with one of oxygen, and nitric acid from one of nitrogen with two of oxygen.

II.

There is a consideration which appears at first sight to be opposed to the admission of our hypothesis with respect to compound substances. It seems that a molecule composed of two or more elementary molecules should have its mass equal to the sum of the masses of these molecules; and that in particular, if in a compound one molecule of one substance unites with two or more molecules of another substance, the number of compound molecules should remain the same as the number of molecules of the first substance. Accordingly, on our hypothesis when a gas combines with two or more times its volume of another gas, the resulting compound, if gaseous, must have a volume equal to that of the first of these gases. Now, in general, this is not actually the case. For instance, the volume of water in the gaseous state is, as M. Gay-Lussac has shown, twice as great as the volume of oxygen which enters into it,

Pacific Bible Seminary

or, what comes to the same thing, equal to that of the hydrogen instead of being equal to that of the oxygen. But a means of explaining facts of this type in conformity with our hypothesis presents itself naturally enough: we suppose, namely, that the constituent molecules of any simple gas whatever (i. e., the molecules which are at such a distance from each other that they cannot exercise their mutual action) are not formed of a solitary elementary molecule, but are made up of a certain number of these molecules united by attraction to form a single one; and further, that when molecules of another substance unite with the former to form a compound molecule, the integral molecule which should result splits up into two or more parts (or integral molecules) composed of half, quarter, &c., the number of elementary molecules going to form the constituent molecule of the first substance, combined with half, quarter, &c., the number of constituent molecules of the second substance that ought to enter into combination with one constituent molecule of the first substance (or, what comes to the same thing, combined with a number equal to this last of half-molecules, quarter-molecules, &c., of the second substance); so that the number of integral molecules of the compound becomes double, quadruple, &c., what it would have been if there had been no splitting-up, and exactly what is necessary to satisfy the volume of the resulting gas.

On reviewing the various compound gases most generally known, I only find examples of duplication of the volume relatively to the volume of that one of the constituents which combines with one or more volumes of the other. We have already seen this for water. In the same way, we know that the volume of ammonia gas is twice that of the nitrogen which enters into it. M. Gay-Lussac has also shown that the volume of nitrous oxide is equal to that of the nitrogen which forms part of it, and consequently is twice that of the oxygen. Finally, nitrous gas, which contains equal volumes of nitrogen and oxygen, has a volume equal to the sum of the two constituent gases, that is to say, double that of each of them. Thus in all these cases there must be a division of the molecule into two; but it is possible that in other cases the division might be into four, eight, &c. The possibility of this division of compound molecules might have been conjectured *a priori;* for otherwise the integral molecules of bodies composed of several substances with a relatively large number of molecules, would come to have a mass excessive in comparison with the molecules of simple substances. We might therefore imagine that nature had some means of bringing them back

to the order of the latter, and the facts have pointed out to us the existence of such means. Besides, there is another consideration which would seem to make us admit in some cases the division in question; for how could one otherwise conceive a real combination between two gaseous substances uniting in equal volumes without condensation, such as takes place in the formation of nitrous gas? Supposing the molecules to remain at such a distance that the mutual attraction of those of each gas could not be exercised, we cannot imagine that a new attraction could take place between the molecules of one gas and those of the other. But on the hypothesis of division of the molecule, it is easy to see that the combination really reduces two different molecules to one, and that there would be contraction by the whole volume of one of the gases if each compound molecule did not split up into two molecules of the same nature. M. Gay-Lussac clearly saw that, according to the facts, the diminution of volume on the combination of gases cannot represent the approximation of their elementary molecules. The division of molecules on combination explains to us how these two things may be made independent of each other.

III.

Dalton, on arbitrary suppositions as to the most likely relative number of molecules in compounds, has endeavoured to fix ratios between the masses of the molecules of simple substances. Our hypothesis, supposing it well founded, puts us in a position to confirm or rectify his results from precise data, and, above all, to assign the magnitude of compound molecules according to the volumes of the gaseous compounds, which depend partly on the division of molecules entirely unsuspected by this physicist.

Thus Dalton supposes that water is formed by the union of hydrogen and oxygen, molecule to molecule. From this, and from the ratio by weight of the two components, it would follow that the mass of the molecule of oxygen would be to that of hydrogen as 7 1-2 to 1 nearly, or, according to Dalton's evaluation, as 6 to 1. This ratio on our hypothesis is, as we saw, twice as great, namely, as 15 to 1. As for the molecule of water, its mass ought to be roughly expressed by $15+2=17$ (taking for unity that of hydrogen), if there were no division of the molecule into two; but on account of this division it is reduced to half, 8 1-2, or more exactly 8.537, as may also be found directly by dividing the density of aqueous vapour 0.625 (Gay-Lussac) by the density of hydrogen 0.0732. This mass only differs from 7, that assigned to it by

Dalton, by the difference in the values for the composition of water; so that in this respect Dalton's result is approximately correct from the combination of two compensating errors,—the error in the mass of the molecule of oxygen, and his neglect of the division of the molecule.

FARADAY

MICHAEL FARADAY was born at Stoke Newington, near London, September 22, 1791. His father was a blacksmith and his own early education did not go beyond the "three R's." In 1805 he was apprenticed to a bookbinder and picked up a great deal of self-instruction by reading the books he bound. He took a great interest in physics and attended the evening lectures. Humphrey Davy hired him as an assistant in 1813.

In 1821 Faraday wrote a history of electro-magnetism, and the same year succeeded in getting a needle to fully rotate around a live wire. This principle was later to lead to the electro-motor.

In 1823 he liquefied chlorine. This broke down the hard distinction between gases and liquids, and liquids and solids, and has since been followed up until practically all gases have been liquefied.

In 1831 Faraday, independently of Henry, discovered magneto-electric induction, and brought forward the idea of "lines of magnetic force," which he later used as a guiding thread in all his experiments.

Taking up the question of electrolysis he showed the enormous amount of electricity involved in the decomposition of a drop of water—"equal to 800,000 discharges" of his large Leyden battery, and showed that the decompositions by electrolysis are absolutely definite.

In 1845 he tried to send polarized rays of light through heavy magnetized glass and found that the action of the magnet interfered with the passage of the light—magnetization causes the plane of polarization to rotate.

Faraday died August 25, 1867. He had done much to discover unity in nature, and his experiments have had incalculable practical value.

ON FLUID CHLORINE

Read March 13, 1823.

It is well known that before the year 1810, the solid substance obtained by exposing chlorine, as usually procured, to a low temperature, was considered as the gas itself reduced into that form; and that Sir Humphry Davy first showed it to be a hydrate, the pure dry gas not being condensible even at a temperature of 40° F.

I took advantage of the late cold weather to procure crystals of this substance for the purpose of analysis. The results are contained in a short paper in the Quarterly Journal of Science, Vol. XV. Its composition is very nearly 27.7 chlorine, 72.3 water, or 1 proportional of chlorine, and 10 of water.

The President of the Royal Society having honoured me by looking at these conclusions, suggested, that an exposure of the substance to heat under pressure, would probably lead to interesting results; the following experiments were commenced at his request. Some hydrate of chlorine was prepared, and being dried as well as could be by pressure in bibulous paper, was introduced into a sealed glass tube, the upper end of which was then hermetically closed. Being placed in water at 60°, it underwent no change; but when put into water at 100°, the substance fused, the tube became filled with a bright yellow atmospere, and, on examination, was found to contain two fluid substances: the one, about three-fourths of the whole, was of a faint yellow colour, having very much the appearance of water; the remaining fourth was a heavy bright yellow fluid, lying at the bottom of the former, without any apparent tendency to mix with it. As the tube cooled, the yellow atmosphere condensed into more of the yellow fluid, which floated in a film on the pale fluid, looking very like chloride of nitrogen; and at 70° the pale portion congealed, although even at 32° the yellow portion did not solidify. Heated up to 100° the yellow fluid appeared to boil, and again produced the bright coloured atmosphere.

By putting the hydrate into a bent tube, afterwards hermetically sealed, I found it easy, after decomposing it by a heat of 100°, to distil the yellow fluid to one end of the tube, and so separate it from the remaining portion. In this way a more complete decomposition of the hydrate was effected, and, when the whole was allowed to cool, neither

of the fluids solidified at temperatures above 34°, and the yellow portion not even at 0°. When the two were mixed together they gradually combined at temperatures below 60°, and formed the same solid substance as that first introduced. If, when the fluids were separated, the tube was cut in the middle, the parts flew asunder as if with an explosion, the whole of the yellow portion disappeared, and there was a powerful atmosphere of chlorine produced; the pale portion on the contrary remained, and when examined, proved to be a weak solution of chlorine in water, with a little muriatic acid, probably from the impurity of the hydrate used. When that end of the tube in which the yellow fluid lay was broken under a jar of water, there was an immediate production of chlorine gas.

I at first thought that muriatic acid and euchlorine had been formed; then, that two new hydrates of chlorine had been produced; but at last I suspected that the chlorine had been entirely separated from the water by the heat and condensed into a dry fluid by the mere pressure of its own abundant vapour. If that were true, it followed, that chlorine gas, when compressed, should be condensed into the same fluid, and, as the atmosphere in the tube in which the fluid lay was not very yellow at 50° or 60°, it seemed probable that the pressure required was not beyond what could readily be obtained by a condensing syringe. A long tube was therefore furnished with a cap and stop-cock, then exhausted of air and filled with chlorine, and being held vertically with the syringe upwards, air was forced in, which thrust the chlorine to the bottom of the tube, and gave a pressure of about 4 atmospheres. Being now cooled, there was an immediate deposit in films, which appeared to be hydrate, formed by water contained in the gas and vessels, but some of the yellow fluid was also produced. As this however might also contain a portion of the water present, a perfectly dry tube and apparatus were taken, and the chlorine left for some time over a bath of sulphuric acid before it was introduced. Upon throwing in air and giving pressure, there was now no solid film formed, but the clear yellow fluid was deposited, and more abundantly still upon cooling. After remaining some time it disappeared, having gradually mixed with the atmosphere above it, but every repetition of the experiment produced the same results.

Presuming that I had now a right to consider the yellow fluid as pure chlorine in the liquid state, I proceeded to examine its properties, as well as I could when obtained by heat from the hydrate. However obtained, it always appears very limpid and fluid, and excessively vola-

tile at common pressure. A portion was cooled in its tube to 0°; it remained fluid. The tube was then opened, when a part immediately flew off, leaving the rest so cooled by the evaporation as to remain a fluid under the atmospheric pressure. The temperature could not have been higher than 40° in this case; as Sir Humphry Davy has shown that dry chlorine does not condense at that temperature under common pressure. Another tube was opened at a temperature of 50°; a part of the chlorine volatilised, and cooled the tube so much as to condense the atmospheric vapour on it as ice.

A tube having the water at one end and the chlorine at the other was weighed, and then cut in two; the chlorine immediately flew off, and the loss being ascertained was found to be 1.6 grains: the water left was examined and found to contain some chlorine: its weight was ascertained to be 5.4 grains. These proportions, however, must not be considered as indicative of the true composition of hydrate of chlorine; for, from the mildness of the weather during the time when these experiments were made, it was impossible to collect the crystals of hydrate, press, and transfer them, without losing much chlorine; and it is also impossible to separate the chlorine and water in the tube perfectly, or keep them separate, as the atmosphere within will combine with the water, and gradually reform the hydrate.

Before cutting the tube, another tube had been prepared exactly like it in form and size, and a portion of water introduced into it, as near as the eye could judge, of the same bulk as the fluid chlorine: this water was found to weigh 1.2 grains; a result, which, if it may be trusted, would give the specific gravity of fluid chlorine as 1.33; and from its appearance in, and on water, this cannot be far wrong.

BIOLOGY

THE BIOLOGY of the first third of the nineteenth century was closely connected on the one hand with human physiology and medicine, and on the other with the geology of the earth. In the middle of the century both of these lines of development were brought to the support of the doctrine of evolution.

At the very beginning of the century Bichat (1771-1802) developed his theory that the body is made up of many tissues, but that the nature of each tissue remains constant and that as a consequence a disease is more liable to spread to many organs following the same tissue than throughout one organ affecting all its different tissues.

At the same time Edward Jenner (1749-1823) was industriously spreading his ideas on the subject of vaccination for small-pox. His theory was that those who had had cow-pox did not have small-pox, and that as the first was never fatal, while one out of ten to fourteen of all deaths were caused by small-pox, it would be much better to give a person cow-pox to make him immune from small-pox. His theory has been fiercely attacked, but it is certainly true that since its general application there have been no such general ravages of the disease as were formerly common, and instead of being largely fatal, the disease is now usually mild.

In 1821 Sir Charles Bell gave to the world his theory of the "nervous circle." He distinguished carefully between motor and sensory nerves, and showed that they must always go in pairs, so that the sensory nerve may keep us informed of the condition of a muscle as the data for its movement by means of an impulse sent along the motor nerve.

The next great advance in biology was made by Karl von Baer. Karl Ernst von Baer was born in Esthonia, Germany, in 1792. He studied at Wurzburg and there began his investigations into the development of the chick and continued them while professor at Königsburg.

In 1828 he published the result of his observations. This was practically the beginning of embryology. He discovered that the embryos of different species and orders are practically alike at the beginning, that it is only after a time in their development that they leave the common road, as it were. Thus the fish would start off on a path of its own in its development first, then the reptile, then the bird, then the mammal. Thus the bird and the mammal follow the same course in their development up to a certain point. As von Baer said, "Perhaps all animals are alike, and nothing but hollow globes at their earliest developmental beginning. The farther back we trace their development, the more resemblance we find in the most different creatures. And this leads to the question whether at the beginning of their development all animals are essentially alike, and referable to one common ancestral form. Considering that the 'germ' (which at a certain stage appears in the shape of a hollow globe or bag) is the undeveloped animal itself, we are not without reason for assuming that the common fundamental form is that of a simple vesicle, from which every animal is evolved, not only theoretically, but historically."

It must be remembered that this statement was made ten years before the discovery of the cells.

From this thought grew the principle that the history of the individual follows the history of the race, and that the history of the race is summarized in the development of its embryo. This is one of the greatest supports of the doctrine of evolution.

In the field of geology this idea of evolution began to make its appearance even before the first of the century, although it was scoffed at by almost everyone until the time of Darwin.

As early as 1790 the great German poet Goethe (1749-1833) showed that the stamens and pistils are only different transformations of the leaves of the flower, and that in fact all parts of the plant are but transformations of the stem and leaves.

In the first part of the century geological thought was led by Lamarck, Cuvier and St. Hilaire, all of them professors at the Museum of Natural History in Paris. In 1801 Lamarck (1744-1829) attacked the permanence and separate creation of species, believing that they

evolved from similar forms. The only explanation he could give was the inheritance of acquired characteristics. This explanation at times becomes ridiculous, and the theory was rather a laughing stock.

His friend Cuvier (1769-1832) was strongly against it. Cuvier emphasized the mutual dependence of the parts of any animal on one another; so much so that from a single fragment he could build up the whole specimen. He gave a wonderful proof of this fact in 1812. A large number of mysterious bones was being dug up around Paris. Cuvier collected them into a great mass and made a careful study of them upon this principle. "At the word of comparative anatomy," he wrote, "each bone, each fragment, regained its place. I cannot describe the joy I felt in finding that, as I discovered one character, all its consequences were gradually brought to light; the feet agreed with the history told by the teeth; the bones of the legs and thighs, and those parts which ought to unite them, agreed with each other. In a word, each one of the species sprang from its own fragments." And—wonderful climax!—the complete specimens were not those of species in existence. He had resurrected a large number of extinct species. The study of such fossils thus begun by Cuvier later became one of the greatest means of attack against the very idea of the special creation of each species for which Cuvier stands.

St. Hilaire (1772-1844), the third of the friends, emphasized a truth complementary to Cuvier's belief in the mutual dependence of parts, that is, that all species have the same general plan, and that the differing parts are only special modifications. "Nature," he said, "has formed all living beings on one plan, essentially the same in principle, but varied in a thousand ways in all the minor parts; all the differences are only a complication and modification of the same organs."

These two theories drew the attention of Europe even in the midst of the Napoleonic wars. They were both, although seemingly opposed, supported with apparently irrefutable arguments. This is because, as was afterwards shown by the doctrine of evolution, it is possible for both ideas to be true.

In 1830 Sir Charles Lyell in England added another great truth to those that were slowly making for some sort of an evolutionary hypothesis. He taught that the whole condition of the earth is the result only of the natural forces that are now at work upon it. He was a great friend of Spencer and Darwin, and may be said with them to be one of the founders of the great theory that marks the second third of the century. This must be left to the succeeding volume.

BICHAT

Marie François Xavier Bichat was born at Thoirette, in the department of Ain, France, in 1771. He studied at Lyons and gave special attention to natural history, anatomy and surgery. In 1793 he was compelled to flee to Paris on account of the Revolutionary disturbances. He became a pupil of the celebrated surgeon Desault and was treated as Desault's adopted son.

In 1800 he made a careful distinction between the animal and organic functions. The next year, after many dissections, he developed his doctrine of tissues,—that the body is composed of many tissues, each of which retains its peculiar organization wherever it is found, and that a disease is more liable to affect the same tissue in different organs of the body than all the different tissues of one organ.

He died July 22, 1802, from the effects of a fall from a staircase. He was one of the greatest of French surgeons and his early death was a great loss to science.

THE DOCTRINE OF TISSUES

Object of the work.

The general doctrine of this work has not precisely the character of any of those which have prevailed in medicine. Opposed to that of Boerhaave, it differs from that of Stahl and those authors who, like him, refer everything in the living economy to a single principle, purely speculative, ideal, and imaginary, whether designated by the name of soul, vital principle, or archeus. The general doctrine of this work consists in analyzing with precision the properties of living bodies, in showing that every physiological phenomenon is ultimately referable to these properties considered in their natural state; that every pathological phenomenon derives from them augmentation, diminution, or alteration; that every therapeutic phenomenon has for its principle the restoration of that part of the natural type, from which it has been changed;

in determining with precision the cases in which each property is brought into action; in distinguishing accurately in physiology as well as in medicine, that which is derived from one, and that which flows from others; in ascertaining by rigorous induction the natural and morbific phenomena which the animal properties produce, and those which are derived from the organic; and in pointing out when the animal sensibility and contractility are brought into action, and when the organic sensibility and the sensible or insensible contractility. We shall be easily convinced upon reflection, that we cannot precisely estimate the immense influence of the vital properties in the physiological sciences, before we have considered these properties in the point of view in which I have presented them. It will be said, perhaps, that this manner of viewing them is still a theory; I will answer that it is a theory like that which shows in the physical sciences, gravity, elasticity, affinity, etc., as the primitive principles of the facts observed in these sciences. The relation of these properties as causes to the phenomena as effects, is an axiom so well known in physics, chemistry, astronomy, etc., at the present day, that it is unnecessary to repeat it. If this work establishes an analogous axiom in the physiological sciences, its object will be attained.

Observations upon the organization of animals.

The properties, whose influence we have just analyzed, are not absolutely inherent in the particles of matter that are the seat of them. They disappear when these scattered particles have lost their organic arrangement. It is to this arrangement that they exclusively belong; let us treat of it here in a general way.

All animals are an assemblage of different organs, which, executing each a function, concur in their own manner, to the preservation of the whole. It is several separate machines in a general one, that constitutes the individual. Now these separate machines are themselves formed by many textures of a very different nature, and which really compose the elements of these organs. Chemistry has its simple bodies, which form, by the combination of which they are susceptible, the compound bodies; such are caloric, light, hydrogen, oxygen, carbon, azote, phosphorus, etc. In the same way anatomy has its simple textures, which, by their combinations four with four, six with six, eight with eight, etc., make the organs. These textures are, 1st, the cellular; 2d, the nervous of animal life; 3d, the nervous of organic life; 4th, the arterial; 5th, the venous; 6th, the texture of the exhalants; 7th,

that of the absorbents and their glands; 8th, the osseous; 9th, the medullary; 10th, the cartilaginous; 11th, the fibrous; 12th, the fibro-cartilaginous; 13th, the muscular of animal life; 14th, the muscular of organic life; 15th, the mucous; 16th, the serous; 17th, the synovial; 18th, the glandular; 19th, the dermoid; 20th, the epidermoid; 21st, the pilous.

These are the true organized elements of our bodies. Their nature is constantly the same, wherever they are met with. As in chemistry, the simple bodies do not alter, notwithstanding the different compound ones they form. The organized elements of man form the particular object of this work.

The idea of thus considering abstractly the different simple textures of our bodies, is not the work of the imagination; it rests upon the most substantial foundation, and I think it will have a powerful influence upon physiology as well as practical medicine. Under whatever point of view we examine them, it will be found that they do not resemble each other; it is nature and not science that has drawn the line of distinction between them.

1st. Their forms are everywhere different; here they are flat, there round. We see the simple textures arranged as membranes, canals, fibrous fasciæs, etc. No one has the same external character with another, considered as to their attributes of thickness or size. These differences of form, however, can only be accidental, and the same texture is sometimes seen under many different appearances; for example, the nervous appears as a membrane in the retina, and as cords in the nerves. This has nothing to do with their nature; it is then from the organization of the properties that the principal differences should be drawn.

2dly. There is no analogy in the organization of the simple textures. We shall see that this organization results from parts that are common to all, and from those that are peculiar to each; but the common parts are all differently arranged in each texture. Some unite in abundance the cellular texture, the blood vessels and the nerves; in others, one or two of these three common parts are scarcely evident or entirely wanting. Here there are only the exhalants and absorbents of nutrition; there the vessels are more numerous for other purposes. The capillary network, wonderfully multiplied, exists in certain textures; in others this network can hardly be demonstrated. As to the peculiar part, which essentially distinguishes the texture, the differences are striking. Color, thickness, hardness, density, resistance, etc., nothing is

similar. More inspection is sufficient to show a number of characteristic attributes of each clearly different from the others. Here is a fibrous arrangement, there a granulated one; here it is lamellated, there circular. Notwithstanding these differences, authors are not agreed as to the limits of the different textures. I have had recourse, in order to leave no doubt upon this point, to the action of different re-agents. I have examined every texture, submitted them to the action of caloric, air, water, the acids, the alkalies, the neutral salts, etc., drying, putrefaction, maceration, boiling, etc.; the products of many of these actions have altered in a different manner each kind of texture. Now it will be seen that the results have almost all been different, that in these various changes each acts in a particular way, each gives results of its own, no one resembling another.

There has been considerable inquiry to ascertain whether the arterial coats are fleshy, whether the veins are of an analogous nature, etc. By comparing the results of my experiments upon the different textures, the question is easily resolved. It would seem at first view that all these experiments upon the intimate texture of systems answer but little purpose; I think, however, that they have effected a useful object, in fixing with precision the limits of each organized texture; for the nature of these textures being unknown, their differences can be ascertained only by the different results they furnish.

3rdly. In giving to each system a different organic arrangement, nature has also endowed them with different properties. You will see in the subsequent part of this work, that what we call texture presents degrees indefinitely varying, from the muscles, the skin, the cellular membrane, etc., which enjoy it in the highest degree, to the cartilages, the tendons, the bones, etc., which are almost destitute of it. Shall I speak of the vital properties? See the animal sensibly predominant in the nerves, contractility of the same kind particularly marked in the voluntary muscles, sensible organic contractility, forming the peculiar property of the involuntary, insensible contractility and sensibility of the same nature, which is not separated from it more than from the preceding, characterizing especially the glands, the skin, the serous surfaces, etc., etc. See each of these simple textures combining, in different degrees, more or less of these properties, and consequently living with more or less energy.

There is but little difference arising from the number of vital properties they have in common; when these properties exist in many, they

take in each a distinctive and peculiar character. This character is chronic, if I may so express myself, in the bones, the cartilages, the tendons, etc.; it is acute in the muscles, the skin, the glands, etc.

Independently of this general difference, each texture has a particular kind of force, of sensibility, etc. Upon this principle rests the whole theory of secretion, of exhalation, of absorption, and of nutrition. The blood is a common reservoir, from which each texture chooses that which is adapted to its sensibility, to appropriate and keep it, and afterwards reject it.

Much has been said since the time of Bordeu, of the peculiar life of each organ, which is nothing else than that particular character which distinguishes the combination of the vital properties of one organ from those of another. Before these properties had been analyzed with exactness and precision, it was clearly impossible to form a correct idea of this peculiar life. From the recount I have just given of it, it is evident that the greatest part of the organs being composed of very different simple textures, the idea of a peculiar life can only apply to these simple textures, and not to the organs themselves.

Some examples will render the point of doctrine which is important, more evident. The stomach is composed of the serous, organic muscular, mucous, and of almost all the common textures, as the arterial, the venous, etc., which we can consider separately. Now if you should attempt to describe in a general manner, the peculiar life of the stomach, it is evidently impossible that you could give a very precise and exact idea of it. In fact the mucous surface is so different from the serous, and both so different from the muscular, that by associating them together, the whole would be confused. The same is true of the intestines, the bladder, the womb, etc.; if you do not distinguish what belongs to each of the textures that form the compound organs, the term peculiar life will offer nothing but vagueness and uncertainty. This is so true, that oftentimes the same textures alternately belong or are foreign to their organs. The same portion of the peritoneum, for example, enters or does not enter, into the gastric viscera, according to their fulness or vacuity.

Shall I speak of the pectoral organs? What has the life of the fleshy texture of the heart in common with that of the membrane that surrounds it? Is not the pleura independent of the pulmonary texture? Has this texture nothing in common with the membrane that surrounds the bronchia? Is it not the same with the brain with relation to its membranes, of the different parts of the eye, the ear, etc.?

When we study a function it is necessary carefully to consider in a general manner, the compound organ that performs it; but when you wish to know the properties and life of this organ, it is absolutely necessary to decompose it. In the same way, if you seek only general notions of anatomy, you can study each organ as a whole; but it is essential to separate the textures, if you have a desire to analyze with accuracy its intimate structure.

Consequences of the preceding principles relative to diseases.

What I have been saying leads to important consequences, as it respects those acute or chronic diseases that are local; for those which, like most fevers, affect almost simultaneously every part, cannot be much elucidated by the anatomy of systems. The first then will engage our attention.

Since diseases are only alterations of the vital properties, and each texture differs from the others in its properties, it is evident that there must be a difference also in the diseases. In every organ, then, composed of different textures, one may be diseased, while the others remain sound; now this happens in a great many cases; let us take the principal organs, for example.

1st. Nothing is more rare than affections of the mass of the brain; nothing is more common than inflammation of the *tunica arachnoides* that covers it. 2d. Oftentimes one membrane of the eye only is affected, the others preserving their ordinary degree of vitality. 3d. In convulsions or paralysis of the muscles of the larynx, the mucous surface is unaffected; and on the other hand, the muscles perform their functions as usual in catarrhs of this surface. Both these affections are foreign to the cartilages, and *vice versa.* 4th. We observe a variety of different alterations in the texture of the pericardium, but hardly ever in that of the heart itself; it remains sound while the other is inflamed. The ossification of the common membrane of the red blood does not extend to the neighboring textures. 5th. When the membrane of the bronchia is the seat of catarrh, the pleura is hardly affected at all, and reciprocally in pleurisy the first is scarcely ever altered. In peripneumonia, when an enormous infiltration in the dead body shows the excessive inflammation that has existed during life in the pulmonary texture, the serous and mucous surfaces often appear not to have been affected. Those who open dead know that they are frequently healthy in incipient phthisis. 6th. We speak of a bad stomach, a weak stomach; this most commonly should be understood as applying to the mucous surface only.

Whilst this secrets with difficulty the nutritive juices, without which digestion is impaired, the serous surface exhales as usual its fluid, the muscular coat continues to contract, etc. In ascites, in which the serous surface exhales more lymph than in a natural state, the mucous oftentimes performs its functions perfectly well, etc. 7th. All authors have said much of the inflammation of the stomach, the intestines, the bladder, etc. For myself, I believe that this disease rarely ever affects at first the whole of any of these organs, except in the case where poison or some other deleterious substance acts upon them. There are for the mucous surface of the stomach and intestines, acute and chronic catarrhs; for the peritoneum serous inflammations; perhaps even for the layer of organic muscles that separates the two membranes, there is a particular kind of inflammation, though we have as yet hardly anything certain upon this point; but the stomach, the intestines, and the bladder are not suddenly affected with these three diseases. A diseased texture can affect those near it, but the primitive affection seizes only upon one. I have examined a great number of bodies in which the peritoneum was inflamed either upon the intestines, the stomach, the pelvis, or universally; now very often when this affection is chronic, and almost always when it is acute, the subjacent organs remain sound. I have never seen this membrane exclusively diseased upon one organ, while that of neighboring ones remain untouched; its affection is propagated more or less remotely. I know not why authors have hardly ever spoken of its inflamation, and have placed to the account of the subjacent viscera that which most often belongs only to this. There are almost as many cases of peritonitis as of pleurisy, and yet while these last have been particularly noticed the others are almost entirely overlooked. Oftentimes that part of the peritoneum corresponding to an organ, is much inflamed; we see it in the case of the stomach; we observe especially after the suppression of the lochia or the menses, that it is the portion that lines the pelvis that is first affected. But soon the affection becomes more or less general; at least examinations after death prove it satisfactorily. 8th. Certainly the acute or chronic catarrh of the bladder, or womb even, has nothing in common with the inflammation of that portion of the peritoneum corresponding with these organs. 9th. Every one knows that diseases of the periosteum have oftentimes no connection with the bone, and vice versa, that frequently the marrow is for a long time affected, while both the others remain sound. There is no doubt that the osseous, medullary and fibrous textures have their peculiar affections which we

shall not confound with the idea we may form of the diseases of the bones. The same can be said of the intestines, of the stomach, etc., in relation to their mucous, serous, muscular textures, etc. 10th. Though the muscular and tendinous textures are combined in a muscle, their diseases are very different. 11th. You must not think that the synovial is subject to the same diseases as the ligaments that surround it, etc.

I think the more we observe diseases, and the more we examine bodies, the more we shall be convinced of the necessity of considering local diseases, not under the relations of the compound organs, which are rarely ever affected as a whole, but under that of their different textures, which are almost always attacked separately.

When the phenomena of disease are sympathetic, they follow the same laws as when they arise from a direct affection. Much has been said of the sympathies of the stomach, the intestines, the bladder, the lungs, etc. But it is impossible to form an idea of them, if they are referred to the organ as a whole, separate from the different textures. 1st. When in the stomach, the fleshy fibres contract by the influence of another organ and produce vomiting, they alone receive the influence, which is not extended either to the serous or mucous surfaces; if it were, they would be the seat, the one of exhalation, the other of sympathetic exhalation and secretion. 2d. It is certain that when the action of the liver is sympathetically increased, so that it pours out more bile, the portion of peritoneum that covers it does not throw out more serum, because it is not affected by it. It is the same of the kidney, the pancreas, etc. 3d. For the same reason the gastric organs upon which the peritoneum is spread do not partake of the sympathetic influences that it experiences. I shall say as much of the lungs in relation to the pleura, the brain in relation to the tunica arachnoides, the heart to the pericardium, etc. 4th. It is undeniable that in all sympathetic convulsions, the fleshy texture alone is affected, and that the tendinous is not so at all. 5th. What has the fibrous membrane of the testicles in common with the sympathies of its peculiar texture? 6th. No doubt a number of sympathetic pains that we refer to the bones, are seated exclusively in the marrow.

I could cite many other examples to prove, that it is not this or that organ that sympathizes as a whole, but only this or that texture in the organs; besides, this an immediate consequence of the nature of sympathies. In fact the sympathies are but aberrations of the vital properties; now these properties vary according to each texture; the sympathies of these textures then would do the same.

EDWARD JENNER

EDWARD JENNER was born May 17, 1749, at Berkeley, Gloucestershire, England. He studied surgery under John Hunter, the comparative anatomist, at London, and began practice in his native town.

About 1796 he was told that milkmaids who had caught the cow-pox were immune from the small-pox, and at once began experimenting on the subject. In 1798 in his "Inquiry" he made his vaccination theory public. This at once excited the greatest interest and vaccination spread rapidly. In 1801 10,000 persons were vaccinated in England. A great discussion arose over the utility and healthfulness of vaccination, but the theory and practice have on the whole much more than held their ground. The general effect has certainly been to decrease the malignity and spread of the disease. In Chemnitz, France, 1870-1871, an epidemic swept through the town. Of the population 53,891 had been vaccinated, 5,712 had not been. Of the vaccinated 953 caught the disease and .0073 of these died; of the unvaccinated 2,643 had the disease and .916 died. Jenner died January 16, 1823.

AN INQUIRY

(THE THEORY OF VACCINATION)

The deviation of Man from the state in which he was originally placed by Nature seems to have proved to him a prolific source of Diseases. From the love of splendour, from the indulgences of luxury, and from his fondness for amusement, he has familiarised himself with a great number of animals, which may not originally have been intended for his associates.

The Wolf, disarmed of ferocity, is now pillowed in the lady's lap. The Cat, the little Tyger of our island, whose natural home is the forest, is equally domesticated and caressed. The Cow, the Hog, the Sheep, and the Horse, are all, for a variety of purposes, brought under his care and dominion.

There is a disease to which the Horse, from his state of domestica-

tion, is frequently subject. The Farriers have termed it the Grease. It is an inflammation and swelling in the heel, from which issues matter possessing properties of a very peculiar kind, which seems capable of generating a disease in the Human Body (after it has undergone the modification which I shall presently speak of), which bears so strong a resemblance to the Small-pox that I think it highly probable it may be the source of that disease.

In this Dairy Country a great number of Cows are kept, and the office of milking is performed indiscriminately by Men and Maid Servants. One of the former having been appointed to apply dressings to the heels of a Horse affected with the Grease, and not paying due attention to cleanliness, incautiously bears his part in milking the Cows, with some particles of the infectious matter adhering to his fingers. When this is the case, it commonly happens that a disease is communicated to the Cows, and from the Cows to the Dairy-maids, which spreads through the farm until most of the cattle and domestics feel its unpleasant consequences. This disease has obtained the name of the Cow-pox. It appears on the nipples of the Cows in the form of irregular pustules. At their first appearance they are commonly of a palish blue, or rather of a colour somewhat approaching to livid, and are surrounded by an erysipelatous inflammation. These pustules, unless a timely remedy be applied, frequently degenerate into phagedenic ulcers, which prove extremely troublesome. The animals become indisposed, and the secretion of milk is much lessened. Inflamed spots now begin to appear on different parts of the hands of the domestics employed in milking, and sometimes on the wrists, which quickly run on to suppuration, first assuming the appearance of the small vesications produced by a burn. Most commonly they appear about the joint of the fingers, and at their extremities; but whatever parts are affected, if the situation will admit, these superficial suppurations put on a circular form, with their edges more elevated than their centre, and of a colour distantly approaching to blue. Absorption takes place, and tumours appear in each axilla. The system becomes affected—the pulse is quickened; and shiverings, with general lassitude and pains about the loins and limbs, with vomiting, come on. The head is painful, and the patient is now and then even affected with delirium. These symptoms, varying in their degrees of violence, generally continue from one day to three or four, leaving ulcerated sores about the hands, which, from the sensibility of the parts, are very troublesome, and commonly heal slowly, frequently becoming

phagedenic, like those from whence they sprung. The lips, nostrils, eyelids, and other parts of the body, are sometimes affected with sores; but these evidently arise from their being needlessly rubbed or scratched with the patient's infected fingers. No eruptions on the skin have followed the decline of the feverish symptoms in any instance that has come under my inspection, one only excepted, and in this case a very few appeared on the arms: they were very minute, of a vivid red colour, and soon died away without advancing to maturation; so that I cannot determine whether they had any connection with the preceding symptoms.

Thus the disease makes its progress from the Horse to the nipple of the Cow, and from the Cow to the Human Subject.

Morbid matter of various kinds, when absorbed into the system, may produce effects in some degree similar; but what renders the Cow-pox virus so extremely singular is, that the person who has been thus affected is forever after secure from the infection of the Small-pox; neither exposure to the variolous effluvia, nor the insertion of the matter into the skin producing this distemper.

In support of so extraordinary a fact, I shall lay before my Reader a great number of instances.

[I shall now conclude this Inquiry with some general observations on the subject, and on some others which are interwoven with it.]

Although I presume it may be unnecessary to produce further testimony in support of my assertion "that Cow-pox protects the human constitution from the infection of the Small-pox," yet it affords me considerable satisfaction to say that Lord Somerville, the president of the Board of Agriculture, to whom this paper was shown by Sir Joseph Banks, has found upon inquiry that the statements were confirmed by the concurring testimony of Mr. Dolland, a surgeon, who resides in a dairy country remote from this, in which these observations were made. With respect to the opinion adduced "that the source of the infection is a peculiar morbid matter arising in the horse," although I have not been able to prove it from actual experiments conducted immediately under my own eye, yet the evidence I have adduced appears sufficient to establish it.

They who are not in the habit of conducting experiments may not be aware of the coincidence of circumstances necessary for their being managed so as to prove perfectly decisive; nor how often men engaged

in professional pursuits are liable to interruptions which disappoint them almost at the instant of their being accomplished.

[However, I feel no room for hesitation respecting the common origin of the disease, being well convinced that it never appears among the cows (except it can be traced to a cow introduced among the general herd which has been previously infected, or to an infected servant), unless they have been milked by someone who, at the same time, has the care of a horse affected with diseased heels.

The spring of the year 1797, which I intended particularly to have devoted to the completion of this investigation, proved, from its dryness, remarkably adverse to my wishes; for it frequently happens, while the farmers' horses are exposed to the cold rains which fall at that season that their heels become diseased, and no Cow-pox then appeared in the neighbourhood.]

The active quality of the virus from the horses' heels is greatly increased after it has acted on the nipples of the cow, as it rarely happens that the horse affects his dresser with sores, and as rarely that a milk-maid escapes the infection when she milks infected cows. It is most active at the commencement of the disease, even before it has acquired a pus-like appearance; indeed I am not confident whether this property in the matter does not entirely cease as soon as it is secreted in the form of pus. I am induced to think it does cease, and that it is the thin darkish-looking fluid only, oozing from the newly-formed cracks in the heels, similar to what sometimes appears from erysipelatous blisters, which gives the disease. Nor am I certain that the nipples of the cows are at all times in a state to receive the infection. The appearance of the disease in the spring and the early part of the summer, when they are disposed to be affected with spontaneous eruptions so much more frequently than at other seasons, induces me to think that the virus from the horse must be received upon them when they are in this state, in order to produce effects: experiments, however, must determine these points. But it is clear that when the Cow-pox virus is once generated, that the cows cannot resist the contagion, in whatever state their nipples may chance to be, if they are milked with an infected hand.

Whether the matter, either from the cow or the horse, will affect the sound skin of the human body, I cannot positively determine; probably it will not, unless on those parts where the cuticle is extremely thin, as on the lips for example. I have known an instance of a poor girl who produced an ulceration on her lip by frequently holding her finger to her mouth to cool the raging of a Cow-pox sore by blowing

upon it. The hands of the farmers' servants here, from the nature of their employments, are constantly exposed to those injuries which occasion abrasions of the cuticle, to punctures from thorns and such like accidents; so that they are always in a state to feel the consequences of exposure to infectious matter.

[It is singular to observe that the Cow-pox virus, although it renders the constitution unsusceptible of the variolous, should, nevertheless, leave it unchanged with respect to its own action. I have already produced an instance to point out this, and shall now corroborate it with another.

Elizabeth Wynne, who had the Cow-pox in the year 1759, was inoculated with variolous matter, without effect, in the year 1797, and again caught the Cow-pox in the year 1798. When I saw her, which was on the 8th day after she received the infection, I found her infected with general lassitude, shiverings, alternating with heat, coldness of the extremities, and a quick and irregular pulse. These symptoms were preceded by a pain in the axilla. On her hand was one large pustulous sore, which resembled that delineated in Plate II.]

It is curious also to observe that the virus, which with respect to its effects is undetermined and uncertain previously to its passing from the horse through the medium of the cow, should then not only become more active, but should invariably and completely possess those specific properties which induce in the human constitution symptoms similar to those of the variolous fever, and effect in it that peculiar change which forever renders it unsusceptible of the variolous contagion.

May it not then be reasonably conjectured that the source of the Small-pox is morbid matter of a peculiar kind, generated by a disease in the horse, and that accidental circumstances may have again and again arisen, still working new changes upon it, until it has acquired the contagious and malignant form under which we now commonly see it making its devastations amongst us? And, from a consideration of the change which the infectious matter undergoes from producing a disease on the cow, may we not conceive that many contagious diseases, now prevalent among us, may owe their present appearance not to a simple, but to a compound origin? For example, is it difficult to imagine that the measles, the scarlet fever, and the ulcerous sore throat with a spotted skin, have all sprung from the same source, assuming some variety in their forms according to the nature of their new combinations? The same question will apply respecting the origin of many other contagious diseases, which bear a strong analogy to each other.

There are certainly more forms than one, without considering the common variation between the confluent and distinct, in which the

Small-pox appears in what is called the natural way. About seven years ago a species of Small-pox spread through many of the towns and villages of this part of Gloucestershire: it was of so mild a nature that a fatal instance was scarcely ever heard of, and consequently so little dreaded by the lower orders of the community that they scrupled not to hold the same intercourse with each other as if no infectious disease had been present among them. I never saw nor heard of an instance of its being confluent. The most accurate manner, perhaps, in which I can convey an idea of it is, by saying that had fifty individuals been taken promiscuously and infected by exposure to this contagion, they would have had as mild and light a disease as if they had been inoculated with variolous matter in the usual way. The harmless manner in which it showed itself could not arise from any peculiarity either in the season or the weather, for I watched its progress upwards of a year without perceiving any variation in its general appearance. I consider it then as a variety of the Small-pox.

[In some of the preceding cases I have noticed the attention that was paid to the state of the variolous matter previous to the experiment of inserting it into the arms of those who had gone through the Cow-pox. This I conceived to be of great importance in conducting these experiments, and were it always properly attended to by those who inoculate for the Small-pox, it might prevent much subsequent mischief and confusion. With the view of enforcing so necessary a precaution, I shall take the liberty of digressing so far as to point out some unpleasant facts relative to mismanagement in this particular, which have fallen under my own observation.]

A medical gentleman (now no more), who for many years inoculated in this neighbourhood, frequently preserved the variolous mattre intended for his use, on a piece of lint or cotton, which, in its fluid state, was put into a vial, corked, and conveyed into a warm pocket; a situation certainly favourable for speedily producing putrefaction in it. In this state (not infrequently after it had been taken several days from the pustules) it was inserted into the arms of his patients, and brought on inflammation of the incised parts, swellings of the axillary glands, fever, and sometimes eruptions. But what was this disease? Certainly not the Small-pox; for the matter having from putrefaction lost, or suffered a derangement in its specific properties, was no longer capable of producing that malady, those who had been inoculated in this manner being as much subject to the contagion of the Small-pox, as if they had never been under the influence of this artificial disease; and many, unfortunately, fell victims to it, who thought themselves in perfect security. The same unfortunate circumstance of giving a dis-

ease, supposed to be the Small-pox, with inefficaceous variolous matter, having occurred under the direction of some other practitioners within my knowledge, and probably from the same incautious method of securing the variolous matter, I avail myself of this opportunity of mentioning what I conceive to be of great importance; and, as a further cautionary hint, I shall again digress so far as to add another observation on the subject of Inoculation.

Whether it be yet ascertained by experiment, that the quantity of variolous matter inserted into the skin makes any difference with respect to the subsequent mildness or violence of the disease, I know not; but I have the strongest reason for supposing that if either the punctures or incisions be made so deep as to go through it, and wound the adipose membrane, that the risk of bringing on a violent disease is greatly increased. I have known an inoculator, whose practice was "to cut deep enough (to use his own expression) to see a bit of fat," and there to lodge the matter. The great number of bad cases, independent of inflammations and abscesses on the arms, and the fatality which attended this practice was almost inconceivable; and I cannot account for it on any other principle than that of the matter being placed in this situation instead of the skin.

At what period the Cow-pox was first noticed here is not upon record. Our oldest farmers were not unacquainted with it in their earliest days, when it appeared among their farms without any deviation from the phenomena which it now exhibits. Its connection with the Small-pox seems to have been unknown to them. Probably the general introduction of inoculation first occasioned the discovery.

Its rise in this country may not have been of very remote date, as the practice of milking cows might formerly have been in the hands of women only; which I believe is the case now in some other dairy countries, and consequently that the cows might not in former times have been exposed to the contagious matter brought by the men servants from the heels of horses. Indeed a knowledge of the source of the infection is new in the minds of most of the farmers in this neighbourhood, but it has at length produced good consequences; and it seems probable from the precautions they are now disposed to adopt, that the appearance of the Cow-pox here may either be entirely extinguished or become extremely rare.

Should it be asked whether this investigation is a matter of mere curiosity, or whether it tends to any beneficial purpose? I should answer that, notwithstanding the happy effects of inoculation, with all

the improvements which the practice has received since its first introduction into this country, it not very infrequently produces deformity of the skin, and sometimes, under the best management, proves fatal.

These circumstances must naturally create in every instance some degree of painful solicitude for its consequences. But as I have never known fatal effects arise from the Cow-pox, even when impressed in the most unfavourable manner, producing extensive inflammations and suppurations on the hands; and as it clearly appears that this disease leaves the constitution in a state of perfect security from the infection of the Small-pox, may we not infer that a mode of inoculation may be introduced preferable to that at present adopted, especially among those families which, from previous circumstances, we may judge to be predisposed to have the disease unfavourably? It is an excess in the number of pustules which we chiefly dread in the Small-pox; but, in the Cow-pox, no pustules appear, nor does it seem possible for the contagious matter to produce the disease from effluvia, or by any other means than contact, and that probably not simply between the virus and the cuticle; so that a single individual in a family might at any time receive it without the risk of infecting the rest, or of spreading a distemper that fills a country with terror.

[Several instances have come under my observation which justify the assertion that the disease cannot be propagated by effluvia. The first boy whom I inoculated with the matter of Cow-pox slept in a bed while the experiment was going forward, with two children who had never gone through either that disease or the Small-pox, without infecting either of them.

A young woman who had the Cow-pox to a great extent, several sores which maturated having appeared on the hands and wrists, slept in the same bed with a fellow-dairymaid who never had been infected with either the Cow-pox or the Small-pox, but no indisposition followed.

Another instance has occurred of a young woman on whose hands were several large suppurations from the Cow-pox, who was at the same time a daily nurse to an infant, but the complaint was not communicated to the child.]

In some other points of view the inoculation of this disease appears preferable to the variolous inoculation.

In constitutions predisposed to scrofula, how frequently we see the inoculated Small-pox rouse into activity that distressful malady. This circumstance does not seem to depend on the manner in which the distemper has shown itself, for it has as frequently happened among those who have had it mildly, as when it has appeared in the contrary way. There are many, who from some peculiarity in the habit resist the common effects of variolous matter inserted into the

skin, and who are in consequence haunted through life with the distressing idea of being insecure from subsequent infection. A ready mode of dissipating anxiety originating from such a cause must now appear obvious. And, as we have seen that the constitution may at any time be made to feel the febrile attack of Cow-pox, might it not, in many chronic diseases, be introduced into the system, with the probability of affording relief, upon well-known physiological principles?

Although I say the system may at any time be made to feel the febrile attack of Cow-pox, yet I have a single instance before me where the virus acted locally only, but it is not in the least probable that the same person would resist the action both of Cow-pox virus and the variolous.

LAMARCK

Jean Baptiste Pierre Antoine de Monet, Chevalier de Lamarck, was born at Bazentin, France, August 1, 1744. He was educated at the college of the Jesuits at Amiens. After serving in the Seven Years' War he occupied himself in the study of medicine and science at Paris.

His *Philosophie Zoologique*, in which he outlined his theory of evolution because of the use or disuse of some member of an animal occasioned by its environment, was published in 1809. We give below selections from this work with an introduction to them taken from *Problems in Biology*. Lamarck died in 1829.

EVOLUTION BY "USE"

There are reasons why Lamarck's system should be of special interest to the student of biology. For it contains the first theory of adaptation through the transformation of species, which is founded upon bare hypothesis, and it may in this respect be regarded as the pattern for all modern biology. It also gives its name to that school which some-

what vaguely opposes itself to the explanation of everything organic as the product of natural selection and fortuitous variation. And thirdly, the hypothetical processes and substances of this system have now become, in the ordinary course of research, obvious fiction; so that the doctrine reveals at once its true relation to observation, even without the demonstration of the impossibility and self-contradiction of its typical hypotheses. For Lamarck continually boasts of the sure method of observation, and fills his pages with innumerable references to organic phenomena; but the advance of research has shown that he, like the other biologists of hypotheses, was deceiving himself on this score. For, whatever had been the actual qualities of organisms, they would have supported his theory equally well, so long as they were qualities of organisms.

But even apart from the light which the study of Lamarck throws upon biological problems and methods in general, the system itself is of great interest. It is certain that this biologist has been, on the whole, misinterpreted, but, on the other hand, it is not easy to be sure that one understands him. And the confusion has taken place chiefly over that key-word of his system, *besoin,* or need. This word has frequently been rendered "desire," and Lamarck has often more than a trace of this meaning in his use of it. But, on reading the whole development of his argument, one immediately finds that neither interpretation may be used exclusively, and that, in fact, *besoin* is a conception which, for the purposes of the theory, must remain undeveloped and undefined. Use the conception of need alone, and the theory is inadequate; restrict yourself to the conception of desire, and the whole theory becomes ridiculous, as flippant controversialists have not been slow to find. It is certainly more than need, and as certainly, it is less than desire. It probably appeared to Lamarck to have quite a definite meaning, requiring no further analysis. One can only suppose that he was unconscious of his easy bridge from the ideal relation of necessity to the psychological fact of desire—from the logical form to the phenomenal process.

In the need, or *besoin,* we have not, of course, to do with a mere negation. It is not a mere being without or not having. The organism has some kind of reference to the thing which is needed. And since every part of an organism is needed by the rest and by circumstances, it is not difficult to find, in this need, a general principle for the origin of all organic characteristics. All characteristics are alike in this point, though in no other; for simply as parts or organisms, they have relations of ne-

cessity with one another. But a mechanism, by which this form of necessity may create the particulars, is wanting to observation. Yet such a mechanism becomes desirable, in order that the emptiness of the theory may be, if only apparently, filled up. The logical distinction must therefore, as we are well accustomed to find, become a quasi-phenomenal difference; and thus there arises the Lamarckian Desire, which is more like Hartmann's Unconscious than it is like anything else, being quite as metaphysical in its origin as is the latter. I shall not attempt the difficult historical question as to what Lamarck supposed his conception of need to include. For our present purpose I merely take his work as it stands, and study it in relation to the problem of adaptation, and watch its development of the old quasi-psychical principle. And I here set down certain important passages from the "Philosophie Zoologique," chapter vii.

"It is evident that the observed form of animals is the product, on the one hand, of the ever-increasing complexity of organization, which tends to form a regular gradation; and on the other hand, of the influences of a multitude of very various circumstances, which tend continually to destroy the regularity of that gradation of the increasing complexity of organization. But I must explain my meaning in these expressions. 'Circumstances affect the form and organization of animals' means that the former, in becoming very different, change, in course of time, even the form and organization by proportionate modifications. Certainly it would be a mistake to use these words literally, for, whatever be the circumstances, they have no directly modifying effect whatever on form and organization. But great changes in circumstances give rise to great changes in the needs of animals, and such changes in their needs necessarily give rise to changes in their actions. And if the new needs become constant or very lasting, the animals take on new habits which are as lasting as the needs which gave rise to them. It is easy to demonstrate this; indeed, it is obvious without explanation. So that it is evident that a great change in circumstances, when it has become constant for a race of animals, leads those animals into new habits. And, if the new circumstances which have become permanent for a race of animals have given rise to new habits in them (that is, have impelled them to new actions which have become habitual), the result will be the use of such a part in preference to that of such another, and in certain cases the total disuse of such a part as has become useless. Now, none of this is hypothesis or my own opinion; it is, on the contrary, truth which only needs attention and observation of facts to become evident." (P. 222.)

Such, then, is the process of adaptation, to some extent in the individual, and altogether in the race. And the process is the same in each case. Moreover, the same process might be thought to underlie the adaptation of part to part within the development of the individual. A race of animals comes into certain circumstances, or is in them (for the change is not essential to the argument), and suffers no direct change from these circumstances. The latter, however, affect the needs, and the needs condition the actions, which, as habits, affect the form and organization. Just so in the theory of natural selection, the circumstances do not directly affect the race, but all adaptation is referred to the indirect affection of form by the environment. This indirectness of the relation of the individual to circumstance is the form which is first attained by all theories of adaptation, and the special manner of it is a secondary point.

The meaning of this indirectness is that no particular of the organism is changed, except through the unity of the organism, and that changes in organisms have the appearance of being purposeful responses to, rather than mere results of, the changes in the circumstances. And the theories which we are studying have no other object than to derive the present purposeful reaction from a series of direct causes which operated long ago. But it must be noticed that this element of theory, which is as strongly held by Weismann as by Lamarck, completely does away with all those analogies for organic adaptation which are drawn from inorganic things. You may see the coat of rust round a ball of iron, or the shore round a bay, given as parallels to the adaptation of one part of the organism to another or of the whole to its environment. In such cases the relation is perfectly direct, and the change in one element involves a calculable complementary change in the other. But it would appear as though such a direct action of circumstances on organic form takes place, if at all, only within the narrowest limits, either in the individual or in the race. We have seen that the nutritive conditions of form are not answered in the individual by results such as one would expect from the conditions, or such as one could give in parallel degrees with the conditions. The determination of sex, for instance, is hardly the direct result of food supply, in the same sense as the shape of the bay is the direct result of the shape of its shore; and the difference does not seem to be merely that of the extent of our knowledge. Let a race of birds take to the water, and, provided that such changes do in truth occur, its toes become webbed and it secretes oil for its feathers. But

these changes are hardly the direct result of cold and wet. In the great majority of cases, one can see the advantage of a structure, and when its advantage is not evident, it is looked for as probably discoverable. But either one cannot speak of an immediate cause at all, or one cannot relate that cause to the advantage. This is notably the case in the study of ontogeny. The events which produce muscle have apparently nothing to do with contraction; bone is not, apparently, produced by stress, nor, so far as one can see, does nerve arise in the individual by feeling. Still this may be only apparently so. Of course embryonic parts have functions, and it is probable that these are not incomparable to their adult functions. But, in fact, we are accustomed to consider rather the end than the cause of the organic part; and when we attempt to find the end as cause, it is plain that the end must operate indirectly, for there are other immediate causes which can be found by research. Hence there arises the necessity of making adaptation indirect, and Lamarck, as we have seen, is plain on this point. What qualities the organism has, it has because it needs them and because they are purposive; for the form is not immediately referable to the circumstances in which it finds itself. That is the beginning and end of the theory, and the rest is only the very vague and hesitating attempt to show how the need can bring about the new structure. That this is Lamarck's central thought appears from his summary of the theory, which includes his two well known laws. He says: "In order to see the true order of things one must recognize:—

"(1) That every change which is at all considerable and continuously maintained in the circumstances of each race of animals, affects in it a real change in their needs.

"(2) That every change in the needs of animals necessitates other actions on their part for the satisfaction of the new needs, and in consequence, other habits.

"(3) That since every new need requires new actions to satisfy it, it demands of the animal which experiences it either the more frequent use of such a part as was formerly less used, so that it becomes considerably developed and enlarged; or the use of new parts which insensibly arise in the organism from the needs, by the efforts of its inner feeling, as I shall presently show from known facts. And so, to arrive at the true cause of so many different forms and so many various habits as are given in the animal world, one must recognize that the infinitely diversified but slowly changing circumstances in which the animals of each

race have successively been placed, have brought about in each race new needs, and consequently changes in their habits. As soon as one has recognized this incontestable truth, it will be easy to perceive how the new needs can have been satisfied and the new habits taken on, if one attends to these two laws of nature, which have always been corroborated by observation.

"First Law.—In every animal which has not passed the limits of its development, the more frequent and sustained use of any organ gradually strengthens that organ, develops it, increases its size, and gives it a strength proportional to the use in question; while the constant disuse of such an organ insensibly weakens and deteriorates it, progressively diminishes its faculties, and finally results in its disappearance.

"Second Law.—All that nature has caused to be acquired by or lost to individuals through the influence of the circumstances to which their race has long been exposed—and therefore through the predominant use of an organ, or through the constant disuse of a part—she preserves, by reproduction, for the new individuals which come from them, provided that the acquired changes are common to the two sexes, or to those which have produced the new individuals." (Vol. i., p. 234.)

So far, except for the allusion to the "*sentiment interieur*," the conception of need is simply that of necessity, and we have no psychological hypothesis. But the principle later develops into desire in such instances as the following:—

"The bird, which is attracted into the water by need, in order that it may find the food by which it lives, spreads out its toes when it would strike the water and move over the surface. The skin which unites the base of the toes gains the habit of stretching, because of this ceaselessly repeated spreading of the toes. Thus, in course of time, the wide membranes which unite the toes of ducks and geese are found as we see them. The same efforts to swim have spread out even the membranes between the toes of frogs, turtles, otters, and beavers. The bird, on the other hand, which is accustomed by its manner of life to sit upon trees, and which comes of individuals which had all contracted this habit, has toes which are necessarily longer than, and differently formed from those of the aquatic animals above mentioned. Its nails have become lengthened in course of time; they are sharpened and bent into hooks in order to clutch the branches upon which the animal so often rests. Even so one feels that the bird of the shore which does not care to swim and which nevertheless needs to approach the edge of the water to find its

prey, is continually in danger of sinking into the mud. That bird, therefore, trying to avoid plunging its body into the water, makes every effort to stretch and lengthen its feet. The result is that the long continued habit of stretching and lengthening its feet which is contracted by that bird and by all of its race, raises the individuals of the race, as it were, upon stilts, inasmuch as they gradually gain long and naked feet. . . . Should an animal make repeated efforts to lengthen its tongue, in order to satisfy its needs, the tongue will acquire considerable length; should it need to seize anything with that organ, the latter will divide and become forked. . . . Needs, always caused by circumstances, and the consequent sustained efforts to satisfy them, can do more than to modify organs, for they can even displace those organs when some of the needs make this necessary." (Vol. i., p. 248.)

CUVIER

Georges Cuvier was born August 23, 1769, at Montbéliard in Würtemberg. His mother saw that he received a good education under herself and at the Academy of Stuttgart, whence he was graduated at eighteen. He served a short time in the Swiss regiment at Châteauvieux, then (1788-1794) became a tutor in the family of the Comte d'Héricy in Normandy.

In 1795 he was made assistant in comparative anatomy at the Museum of Natural History, and the same year elected a member of the Institute. From this time until his death in 1832, he labored incessantly to reorganize the classification of the animal kingdom. His great principle was the correlation of parts in the individual. This made him the leading supporter of the old idea of the permanence of species. Yet his magnificent work in reconstruction of the fossil remains near Paris and in thus resurrecting dead species did much to furnish the links between species which has been made a strong argument against their immutability.

THE MUTUAL RELATIONS OF FORMS IN ORGANIZED BEINGS

Principle by which this determination is effected.

Fortunately, comparative anatomy possesses a principle, which, when properly developed, enables us to surmount all the obstacles. This principle consists in the mutual relation of forms in organised beings, by means of which, each species may be determined, with perfect certainty, by any fragment of any of its parts.

Every organised being forms a whole—a peculiar system of its own, the parts of which mutually correspond, and concur in producing the same definitive action, by a reciprocal reaction. None of these parts can change in form, without the others also changing; and consequently, each of them, taken separately, indicates and ascertains all the others.

Thus, if the intestines of an animal are so organised as to be fitted for the digestion of flesh only, and that flesh recent, it is necessary that its jaws be so constructed as to fit them for devouring live prey; its claws for seizing and tearing it; its teeth for cutting and dividing it; the whole system of its organs of motion, for pursuing and overtaking it; and its organs of sense for discovering it at a distance. It is even requisite that nature have placed in its brain the instinct necessary for teaching it to conceal itself, and to lay snares for its victims.

Such are the general conditions which nature imposes upon the structure of carnivorous animals; and which every animal of this description must indispensably combine in its constitution, for without them its race could not subsist. But subordinate to these general conditions, there exist others, having relation to the size, the species, and the haunts of the prey for which the animal is adapted; and from each of these particular conditions, there result modifications of detail in the forms which arise from the general conditions. Thus not only the class, but the order, the genus, and even the species, are found expressed in the form of each part.

In fact, in order that the jaw may be able to seize, it must have a certain form of condyle; that the resistance, the moving power, and the fulcrum, should have a certain relative position in regard to each other; and that the temporal muscles should be of a certain size; the hollow

or depression, too, in which these muscles are lodged, must have a certain depth; and the zygomatic arch, under which they pass, must not only have a certain degree of convexity, but it must be sufficiently strong to support the action of the masseter.

In order that the animal may be able to carry off its prey, it must have a certain degree of vigour in the muscles which elevate the head; whence there results a determinate form in the vertebrae from which these muscles take their rise, and in the occiput into which they are inserted.

In order that the teeth may be able to cut flesh, they must be sharp-edged, and must be so in a greater or less degree, according as they have flesh more or less exclusively to cut. Their base will be solid, according to the quantity and size of the bones which they have to break. The whole of these circumstances must necessarily influence the development and form of all the parts which contribute to move the jaws.

In order that the paws may be able to seize the prey, there must be a certain degree of mobility in the toes, and a certain degree of strength in the claws, from which there will result determinate forms in all the phalanges, and a corresponding distribution of muscles and tendons. The fore-arm, or cubitus, must possess a certain facility of turning, from which there will also result determinate forms in the bones of which it is composed. But the bones of the cubitus being articulated to the humerus, a change in the proportions of the former, will necessarily induce a corresponding change in the latter. The shoulder-bones must have a certain degree of firmness in such animals as make use of their fore-legs for seizing, and from this there must also result a certain peculiarity in their form. The play of all these parts will require certain proportions in all their muscles, and the impressions made by these muscles so proportioned, will determine still more particularly the forms of the bones.

It is easy to see that similar conclusions may be drawn with regard to the posterior extremities which contribute to the rapidity of the general motions; with regard to the composition of the trunk, and the forms of the vertebrae, which exert an influence upon the facility and flexibility of these motions; and, lastly, with regard to the forms of the bones of the nose, of the orbit, and of the ear, the connection of which with the perfection of the senses of smell, sight, and hearing, is evident. In a word, the form of the tooth regulates the forms of the condyle,

of the scapula, and of the claws, in the same manner as the equation of a curve regulates all its properties; and as, by taking each property separately for the base of a particular equation, we find both the ordinary equation, and all the other properties whatever; so, the claw, the scapula, the condyle, the femur, and all the other bones taken separately, give the tooth, or are reciprocally given by it; and thus, by commencing with any one of these bones, a person who possesses an accurate knowledge of the laws of organic economy, may reconstruct the whole animal.

This principle seems sufficiently evident, in the general acceptation in which it is here taken, and does not require any fuller demonstration; but when it comes to be applied, there will be found many cases where our theoretical knowledge of the relations of forms will not be sufficient, unless it be supported by observation and experience.

For example, we are well aware, that hoofed animals must all be herbivorous, since they have no means of seizing prey. It is also evident that, having no other use to make of their fore-legs than to support their body, they do not require a shoulder so vigorously organised as that of carnivorous animals; they have, therefore, no acromion or clavicle, and their shoulder-blades are narrow. Having also no occasion to turn their fore-arm, their radius is united to the ulna by ossification, or at least articulated by a ginglimus or hinge-joint, and not by arthrodia or ball and socket, to the humerus. Their food being herbaceous, will require teeth furnished with flat surfaces, for bruising seeds and plants. The crown of the teeth must also be unequal, and, for this purpose, must be composed of parts alternately consisting of bone and of enamel. Teeth of this structure necessarily require horizontal motions to enable them to triturate the food; and hence the condyle of the jaw cannot be so strictly confined within its articulating cavity as in the carnivorous animals, but must be flattened, and thus correspond with a more or less flattened surface of the temporal bones. Further, the temporal fossa, which will only have a small muscle to contain, will be narrower, and not so shallow, as that of carnivorous animals. All these circumstances are deducible from each other, according to their greater or less generality, and in such a manner that some of them are essential and exclusively peculiar to hoofed animals, while others, although equally necessary in these animals, are not entirely peculiar to them, but may occur in other animals also, where the rest of the conditions will permit their existence.

If we proceed to consider the orders or subdivisions of the class of hoofed animals, and examine what modifications the general conditions undergo, or rather what particular conditions are conjoined with them, according to the respective characters of these orders, the reasons of these subordinate conditions begin to appear less obvious. We can still easily conceive, in general, the necessity of a more complicated system of digestive organs in those species which have a more imperfect masticatory system; and hence we may presume, that these latter must be rather ruminating animals, in which there is wanting such or such an order of teeth; and may also deduce from the same consideration, the necessity of a certain form of the oesophagus, and of corresponding forms in the vertebrae of the neck, &c. But I doubt whether it would have been discovered, independently of actual observation, that the ruminating animals should all have cloven hoofs, and that they should be the only animals having them; that there should be horns on the forehead in this class alone; or that such of them as have sharp canine teeth, should, in general, have no horns.

However, since these relations are constant, we may be assured that they have a sufficient cause; but as we are not acquainted with that cause, we must supply the defect of theory by means of observation, and in this way establish empirical laws which become nearly as certain as those deduced from rational principles, when founded upon observations, the authenticity of which is proved by frequent repetition. Hence, at the present day, any one who observes only the print of a cloven foot, may conclude that the animal which left this impression ruminates; and this conclusion is quite as certain as any other in physics, or in moral philosophy. This simple footmark, therefore, indicates at once to the observer the forms of the teeth, of the jaws, of the vertebrae, of all the bones of the legs, thighs, shoulders, and pelvis of the animal which had passed. It is a surer mark than all those of Zadig. That there are secret reasons, however, for all these relations, is what observation alone is sufficient to shew, independently of any general principles of philosophy.

In fact, when we construct a table of these relations, we remark not only a specific constancy, if the expression may be allowed, between a particular form of a particular organ, and some other form of a different organ; but we also perceive a classic constancy of conformation, and a corresponding gradation, in the development of these two organs, which demonstrate their mutual influence, almost as well as the most perfect deduction of reason.

For example, the dentary system of the hoofed animals, which are not ruminant, is in general more perfect than that of the cloven-footed or ruminating animals, because the former have either incisors, or canine teeth, and almost always both in each jaw; and the structure of their foot is in general more complicated, because they have more toes or claws, or their phalanges less enveloped in the hoof,—or a greater number of distinct bones in the metacarpus and metatarsus—or more numerous tarsal bones—or a fibula more distinct from the tibia—or, lastly, that all these circumstances are often united in the same species of animals.

It is impossible to assign reasons for these relations; but we are certain that they are not the effects of chance, because, whenever a cloven-footed animal manifests, in the arrangement of its teeth some tendency to approach the animals we now speak of, also manifests a similar tendency in the arrangement of its feet. Thus the camels, which have canine teeth, and even two or four incisors in the upper jaw, have an additional bone in the tarsus, because their scaphoid bone is not united to the cuboid, and they have very small hoofs, with corresponding phalanges. The musk animals, whose canine teeth are much developed, have a distinct fibula along the whole length of their tibia; while the other cloven-footed animals have only, in place of a fibula, a small bone articulated at the lower end of the tibia. There is, therefore, a constant harmony between two organs apparently having no connection; and the gradations of their forms preserve an uninterrupted correspondence, even in those cases in which we cannot account for their relations.

Now, by thus adopting the method of observation as a supplementary means, when theory is no longer able to direct our views, we arrive at astonishing results. The smallest articulating surface of bone, or the smallest apophysis, has a determinate character, relative to the class, the order, the genus, and the species to which it belonged; insomuch, that when one possesses merely a well preserved extremity of a bone, he can, by careful examination, and the aid of a tolerable analogical knowledge, and of accurate comparison, determine all these things with as much certainty as if he had the entire animal before him. I have often made trial of this method upon portions of known animals, before reposing full confidence upon it, in regard to fossil remains; and it has always proved so completely satisfactory that I have no longer any doubts regarding the certainty of the results which it has afforded me.

It is true, that I have enjoyed all the advantages which were neces-

sary for the undertaking; and that my favourable situation, in the Museum of Natural History at Paris, and assiduous research for nearly thirty years, have procured me skeletons of all the genera and subgenera of quadrupeds, and even of many species in some genera, and of several varieties of some species. With such means, it was easy for me to multiply my comparisons, and to verify in all their details the applications which I have made of the various laws deducible from such circumstances as have been stated.

We cannot here enter into a more lengthened detail of this method, and must refer to the large work on Comparative Anatomy, in which all its rules will be found. In the mean time, an intelligent reader may gather a great number of these from the work upon Fossil Bones, if he take the trouble of attending to all the applications of them which we have there made. He will see, that it is by this method alone that we are guided, and that it has almost always sufficed for referring each bone to its species, when it was a living species—to its genus, when it was an unknown species—to its order, when it was a new genus—and to its class, when it belonged to an order not hitherto established—and to assign it, in the three last cases, the proper characters for distinguishing it from the nearest resembling orders, genera, and species. Before the commencement of our researches, naturalists had done no more than this with regard to animals, which they had the opportunity of examining in their entire state. Yet, in this manner, we have determined and classed the remains of more than a hundred and fifty mammiferous and oviparous quadrupeds.

SIR CHARLES BELL

Sir Charles Bell was born at Edinburgh, in November, 1774. He attended the high school and university in that city, but says that all his early education came from his mother. He gave no great promise, except in drawing, until he entered on the study of anatomy. In this field he quickly made himself famous.

In 1807 he made the distinction between motor and sensory nerves and did much in tracing their sources. In 1814 he was made surgeon

to the Middlesex Hospital in London. He completed his great theory of the mutual action of the motor and sensory nerves in his paper on the Nervous Circle read before the Royal Society in 1821. In 1833 he made a careful study of the mechanism of the hand as evincing design.

He died April 28, 1842.

ON THE NERVOUS CIRCLE, ETC.

(Read before the Royal Society, February 16, 1826)

In the papers which I have had the honour of addressing to the Society on the arrangements of the nerves of the human body, I have proceeded upon a comparison of the nerves of the spinal marrow with the nerves of the encephalon.

It was shown that the former were compounded of filaments possessing different powers, and that each nerve, having several properties or endowments collected within itself, proceeded to its destination without intricacy.

Unless we had discovered the composition of the roots of these nerves, we should have continued to suppose that one nerve was simple in its structure, and yet capable of bestowing the very different properties of motion and sensation.

But having satisfied myself that the roots of the spinal nerves had distinct powers, I followed up the columns of the spinal marrow; and with a knowledge of the composition of those nerves as a key, I examined the different properties of the nerves of the encephalon. Here, in the head, the nerves arise simply, and diverge to their destinations without the close compact or union which the spinal nerves form; and accordingly, the anatomy of these nerves of the brain affords satisfactory proof of their uses or functions. I am about to shew that every muscle has two nerves, of different properties, supplied to it. This I could not have ascertained by examination of the spinal nerves alone, because of the intimate union of all their fibres; I had recourse therefore to the nerves of the head. By prosecuting those inquiries, which led to the distinction of the different classes of nerves, I hope now to demonstrate —*that where nerves of different functions take their origin apart and run a different course, two nerves must unite in the muscles, in order to perfect the relations between the brain and these muscles.*

It may be in the recollection of the Society, that my first paper

shewed a difference in the nerves of the face; that by dividing one nerve, sensation was destroyed, whilst motion remained; and by dividing the other, motion was stopped, whilst sensibility remained entire.

Other parts of the nervous system since that time have engaged my attention; and it is only now that I am able to make full use of the facts announced in my first paper, which were indeed expected to lead to further improvement of our knowledge of the animal economy. When I distinguished the two classes of nerves going to the muscles of the face, and, on dividing the motor nerve shewed that the muscles were deprived of motion by this experiment, the natural question suggested itself: Of what use are the nerves that remain entire?

For a time I believed that the fifth nerve, which is the sensitive nerve of the head and face, did not terminate in the substance of the muscles, but only passed through them to the skin; and I was the more inclined to this belief on observing that the muscular parts, when exposed in surgical operations, did not possess the exquisite sensibility which the profusion of the sensitive nerves would imply, or which the skin really possesses.

Still, dissection did not authorize that conclusion. I traced the sensitive nerves into the substance of the muscles; I found that the fifth pair was distributed more profusely to the muscles than to the skin; and that, estimating all the nerves given to the muscles, the greater proportion belonged to the fifth or sensitive nerve, and the smaller proportion to the seventh or motor nerve. On referring to the best authorities, as Meckel, and my excellent preceptor Monro, the extremities of the fifth were described by them as going into the muscles; so that of this fact there cannot be a doubt.

Having in a former paper demonstrated that the *portio dura* of the seventh nerve was the motor of the face, and that it ran distinct from the sensitive nerve, the fifth; and having observed that they joined at their extremities, or plunged together into the muscles, I was nevertheless unwilling to draw a conclusion from a single instance; and therefore cast about for other examples of the distribution of the muscular nerves. It was easy to find motor nerves in combination with sensitive nerves, for all the spinal nerves are thus composed; but we wanted a muscular nerve clear in its course, to see what alliance it would form in its ultimate distribution in the muscle. I found in the lower maxillary nerve the example I required.

The fifth pair, from which this maxillary nerve comes, as I have

elsewhere explained, is a compound nerve; that is to say, it is composed of a nerve of sensation and a nerve of motion. It arises in two roots; one of these is the muscular nerve, the other the sensitive nerve: on this last division the Gasserian ganglion is formed. But we can trace the motor nerve clear of the ganglion and onward in its course to the muscles of the jaws, and so it enters the temporal, masseter, pterygoid, and buccinator muscles.

If all that is necessary to the action of a muscle be a nerve to excite contraction, these branches should have been unaccompanied; but on the contrary I found that before these motor nerves entered the several muscles, they were joined by branches of the nerves which came through the Gasserian ganglion, and which were sensitive nerves.

I found the same result on tracing motor nerves into the orbit, and that the sensitive division of the fifth pair of nerves was transmitted to the muscles of the eye, although these muscles were supplied by the third, fourth, and sixth nerves.

A circumstance observed on minute dissection remained unexplained—when motor nerves are proceeding to several muscles they form a plexus; that is, an interlacement and exchange of fibres takes place.

The muscles have no connection with each other, they are combined by the nerves; but these nerves, instead of passing betwixt the muscles, interchange their fibres before their distribution to them, and by this means may combine the muscles into classes. The question, therefore, may thus be stated: Why are nerves, whose office it is to convey sensation, profusely given to muscles in addition to those motor nerves which are given to excite their motions? and why do both classes of muscular nerves form plexuses?

To solve this question, we must determine whether muscles have any other purpose to serve than merely to contract under the impulse of the motor nerves. For if they have a reflective influence, and if their condition is to be felt or perceived, it will presently appear that the motor nerves are not suitable internuncii between them and the sensorium.

I shall first inquire whether it will be necessary to the goverance of the muscular frame that there shall be a consciousness of the state or degree of action of the muscles? That we have a sense of the condition of the muscles, appears from this: that we feel the effects of over exertion and weariness, and are excruciated by spasms, and feel the irksomeness of continued position. We possess the power of weighing with

the hand:—what is this but estimating the muscular force? We are sensible of the most minute changes of muscular exertion, by which we know the position of the body and limbs, when there is no other means of knowledge open to us. If a rope dancer measure his steps by the eye, yet, on the other hand a blind man can balance his body. In standing, walking, and running, every effort of the voluntary power which gives motion to the body is directed by a sense of the condition of the muscles; and without this sense we could not regulate their actions.

If it were necessary to enlarge on this subject, it would be easy to prove that the muscular exertions of the hand, the eye, the ear, and the tongue, are felt and estimated when we have perception through those organs of sense; and that without a sense of the actions of the muscular frame, a very principal inlet to knowledge would be cut off.

If it be granted that there must be a sense of the condition of the muscle, we have next to show that a motor nerve is not a conductor towards the brain, and that it cannot perform the office of a sensitive nerve.

Without attempting to determine the cause, whether depending on the structure of the nervous cord, or the nature or the source of the fluid contained, a pure or simple nerve has the influence propagated along it in one direction only, and not backwards and forwards; it has no reflected operation or power retrograde; it does both act from and to the sensorium.

Indeed, reasons without experience would lead us to conclude, that whatever may be the state, or the nature of the activity of a motor nerve during exertion, it supposes an energy proceeding from the brain towards the muscles, and precludes the activity of the same nerve in the opposite direction at the same moment. It does not seem possible, therefore, that a motor nerve can be the means of communicating the condition of the muscles to the brain.

Expose the two nerves of a muscle; irritate one of them, and then the muscle will act; irritate the other and the muscle will remain at rest. Cut across the nerve which had the power of exciting the muscle, and stimulate the one which is undivided, the animal will give indication of pain; but although the nerve be injured so as to cause universal agitation, the muscle with which it is directly connected does not move. Both nerves being cut across, we shall still find that by exciting one of the nerves attached to the muscle, the muscle is made to act, even days

after the nerve has been divided; but the other nerve, though equally attached and distributed to the muscle, has no influence at all.

Anatomy forbids us to hope that the experiment will be as decisive when we apply the irritants to the extremities of the divided nerves which are connected with the brain; for all the muscular receive more or less minute filaments of sensitive nerves, and these we can trace into them with the knife, and consequently they will indicate a certain degree of sensibility when hurt. To expose these nerves near their origins, and before any filament of a sensitive nerve mingles with them, requires the operator to cut deep, to break up the bones, and to divide the blood vessels. All such experiments are much better omitted; they never can lead to satisfactory conclusions.

Experience on the human subject most abundantly illustrates these facts. For example:—a patient of mine having, by a tumor pressing on the nerves of the orbit, lost the sensibility of the eye and eyelids, she retained the motion of the eyelids by the *portio dura* coming around externally and escaping from the pressure which injured the other nerves. Here the course of sensibility backwards to the brain was cut off, while the course of volition forwards was free. She could not tell whether the eyelid was open or shut, but being asked to shut the eye which was already closed, she acted with the orbicular muscle and puckered the eyelids. Nay, when the eye was scarified she had no sensation, and did not wink the eyelids. There was no motion in this case, because the sensitive fifth pair had lost its power to carry back the sensation, although she could command the motion by voluntary exertion. It will further be remarked in the cases in the appendix, that if the patient could see, he shrunk and winked when a blow was aimed at his eye, although there was no motion when the eye was touched with a feather. Here the sensation was carried backwards by the optic nerve when the patient winked; for the fifth had lost its power.

In another instance, when the eye was insensible, touching the eye gave rise to a blush of redness and to inflammation, because the part was excited; nevertheless the muscles were not called into action. The relations which connect the sensibility of the eye with the motions of the eye and eyelid, are established in the roots of the fifth and seventh in the brain; the loss of the function of the fifth nerve therefore interrupted the circle. Here, too, the motor nerve of the eyelid was perfect, and the eyelid readily acted under the influence of the will; but when the eyelid was touched or pricked it communicated no sensation. Is this insensi-

bility of the motor nerve owing to the course of its influence being from the brain and not towards it? When the nostril had lost its sensibility from an affection of the fifth pair, we could not excite sneezing; when the tongue and cheek had lost sensibility, the morsel was permitted to remain between the tongue and cheek until it was offensive, although the motions both of the tongue and of the cheek were perfect. All these phenomena correspond with the experiments on animals.

Now, it appears that the muscle has a nerve in addition to the motor nerve, which being necessary to its perfect function, equally deserves the name of muscular. This nerve, however, has no direct power over the muscle, but circuitously through the brain, and by exciting sensation it becomes a cause of action.

Between the brain and the muscles there is a circle of nerves; one nerve conveys the influence from the brain to the muscle, another gives the sense of the condition of the muscle to the brain. If the circle be broken by the division of the motor nerve, motion ceases; if it be broken by the division of the other nerve there is no longer a sense of the condition of the muscle, and therefore no regulation of its activity.

We have noticed that there is a plexus formed both on the nerves which convey the will to the muscles, and on the nerves which give the sense of the condition of the muscles. The reason for this I apprehend to be, that the nerves must correspond with the muscles, and consequently with one another. If the motor nerve has to arrange the action of several muscles so as to produce a variety of motions, the combinations must be formed by the interchange of filaments among the nerves before they enter the muscles, as there is no connection between the muscles themselves. As the various combinations of the muscles have a relation with the motor nerves, the same relations must be established by those nerves which convey the impression of their combinations, and a similar plexus or interchange of filaments therefore characterizes both.

We have seen that the returning muscular nerves are associated with the nerves of sensibility to the skin, but they are probably very distinct in their endowments, since there is a great difference between conveying the sense of external impressions, and that of muscular action.

In surgical operations the fact is forced upon our attention, that the pain of cutting the skin is exquisite, compared with that of cutting the muscles; but we must remember that pain is a modification of the endowment of a nerve, serving as a guard to the surface, and to the

deeper parts consequently. This is further exemplified in the sensibility of the skin to heat; whilst, on the contrary, a muscle touched with a hot or cold sponge during an operation, gives no token of the change of temperature but by the degree of pain.

Many of the nerves which perform the most delicate operations of the economy, are not more sensible to pain than the common texture of the frame. The lower degree of sensibility to pain possessed by the muscles, and their insensibility to heat, is no argument against their having nerves which are alive to the most minute changes of action in the fibres.

When the anatomist shall find both the *portio dura* of the seventh and the fifth going to the integuments of the head and face, he may naturally ask, Why are there two nerves to the surface? and he will probably reflect, that although the principal office of the nerves of the skin is to convey impressions to the sensorium, yet the influence of the mind is conveyed to the surface. The condition of the mind in passion, for example, is as forcibly communicated to the skin as to the muscles themselves; and therefore if a branch of the fifth be necessary to convey sensation from the surface of the sensorium, the seventh is necessary to the change of vascular action, and to the condition of the pores when affected by a cause proceeding from within, outwards.

I feel a hesitation when I reason upon any other ground than on the facts of anatomy. Experiments are more apt to be misinterpreted; and the very circumstance of a motor and sensitive nerve being combined together, affords a pregnant source of error.

It is natural to suppose that the galvanic influence might be brought to bear on this subject; but I may be permitted to suggest to any one who pursues it in this way, that it will be necessary to distinguish the effects produced by the nerve as a mere conductor, and when performing its living functions. The nerve, dead or alive, may convey the galvanic power like a wet cord; but if the nerve be in possession of its living property, a great deal will depend upon the direction in which the galvanic fluid is transmitted. If it be transmitted against the course of the nervous influence, it will reach the muscles and act feebly, although the power of the nerve be not in this case exercised upon the muscle; but if it be transmitted in the proper course towards the muscles, the nerve itself will be excited, and its power propagated so as to produce violent action in the corresponding muscles.

PHYSICS

At the very beginning of the nineteenth century Volta was perfecting his battery and Count Rumford making his experiments on heat as a mode of motion. Volta's battery at once led to the great advances in electricity made during the first third of the century, but Rumford's experiments were unappreciated for almost half a century.

In light, Young solved the problem of the interference of light waves in accordance with the wave theory of light in 1801. In the previous year Herschel had discovered that the hottest rays of the spectrum lie beyond the red rays, being invisible to the eye, and in 1801 Ritter of Jena found that, at the other end of the spectrum, invisible and light lavender rays beyond the violet ones have the curious chemical power of turning nitrate of silver black. In 1802 Humphrey Davy managed to take a few sun pictures on this principle, using chloride of silver, but he could not keep them from fading, and it remained for Daguerre, in 1839, to make photography a success. Fraunhofer (1787-1826), the optician and manager of a physical laboratory near Munich, noted the black lines in the sun's spectrum in 1814, and in 1822 Sir John Herschel showed that burning gases and vapors show bright lines at different portions of the spectrum. He even suggested that this be used for chemical analysis, but the matter was not taken up fully until later.

An important advance made in electricity the same year as the invention of Volta's battery in 1800 was its application to chemistry in the electrolysis, or decomposition by an electric current, of water by Nicholson and Carlisle. This was soon extended by Davy to the dis-

covery of new substances. The next great step was not until 1819. Hans Christian Oersted of Denmark in this year discovered that a magnetic needle was affected by a current passing along a wire near it. By later experiments he proved that *an electric current passing near a magnetic needle makes it turn so as to lie across the path of the current.* This was the first step in connecting electricity and magnetism.

André Ampère (1775-1864) taking up the subject, showed that *if a man will imagine himself standing so that the positive current comes out of his mouth and returns by his feet the north pole of the needle or magnet turns to his left side.* He concluded that if an electric current causes a magnetic current across itself, then two electric wires ought to have magnetic currents running across them and ought to attract or repel each other. He experimented on this and proved that if the current is sent in the same direction through the wires they move toward each other, but if in opposite directions they repel each other. It now occurred to him that if electric currents cause magnetic ones he should be able to make a magnet by passing a current around a steel bar. This he found he could do. This was the last great step made in the new science by Ampère. This work was all done in 1820 while he was professor at the Polytechnique in Paris.

Henry in America and Faraday in London followed up Ampère's experiments. Their results were much the same. On the theory that electricity is a force and gives rise to magnetic lines of force, Faraday saw that if a current going around a wire makes a magnet, a magnet ought to make an electric wire revolve around it and ought itself to revolve around a live wire. To prove this he took two cups of mercury with the wire for the current inserted in the bottom of each. The only connection between the two cups was by means of a small bar magnet floating on end in one cup, then along a copper wire, the end of which was free to move around a fixed bar magnet in the other cup. Sending a current through, he found that in the first cup the magnet would move around the wire and that in the second the wire would move around the magnet. This is the principle and first beginning of the electric motor. Soon after this he wound about three hundred yards of wire around a hollow cylinder and showed that when a magnet was passed into and out of the cylinder it developed an electric current in the wire. This was the beginning of the dynamo.

COUNT RUMFORD

Sir Benjamin Thompson was born in Woburn, Mass., in 1753. His family had lived in New England for a century. He seems to have been well cared for by his step-father and was even at fourteen well educated in mathematics. He tells us that at that early age he calculated a solar eclipse within four seconds.

In 1766 he was apprenticed to a storekeeper at Salem. At nineteen he "was married" to the widow of a Colonel Rolfe, fourteen years his senior, but possessed of considerable property. In 1775 as a friend of the governor of New Hampshire he was thrown into prison by the patriots, but released without being acquitted. He changed his property into cash and went to Boston. On its evacuation he was sent to England with dispatches. He found favor and office under the Secretary of State, and served for a short time at the close of the war against the colonies. His former countrymen charged him with tearing down a church and building a fort from it on Long Island.

After the war he entered the service of Bavaria as minister of war and police and grand chamberlain. His social reforms as head of the police were prompt and sweeping. One day he arrested 2,600 beggars and put them to work in an industrial establishment at earning their own living. He was made Count of the Holy Roman Empire in 1791. A few years later he saved Munich from occupation by the French and Austrians after the elector had fled. In 1796 President Adams offered him an office as inspector of artillery or engineer, but he declined.

All this time he had been interested in science, especially in problems of heat, light, and fuel. He made the first strong argument to prove that heat is a form of motion before 1800, and reinforced his position for several years with additional evidence, but the theory was long in being accepted. At last in Joule's time it became the basis of the great doctrine of the conservation of energy. He founded the Royal Institution and a number of funds for scientific and social purposes.

He married the widow of Lavoisier, but this union was also unhappy. He died in 1814. He was a statesman, mathematician, soci-

ologist, architect, and, most of all, a physicist that deserves a lasting memory.

THE NATURE OF HEAT

After I had long meditated upon a way of putting this interesting problem entirely out of doubt by a perfectly conclusive experiment, I thought finally that I had discovered it, and I think so still.

I argued that if the existence of caloric was a fact, it must be absolutely impossible for a body or for several individual bodies, which together made one whole, to communicate this substance continuously to various other bodies by which they were surrounded, without this substance gradually being entirely exhausted.

A sponge filled with water, and hung by a thread in the middle of a room filled with dry air, communicates its moisture to the air, it is true, but soon the water evaporates and the sponge can no longer give out moisture. On the contrary, a bell sounds without interruption when it is struck, and gives out its sound as often as we please without the slightest perceptible loss. Moisture is a substance; sound is not.

It is well known that two hard bodies, if rubbed together, produce much heat. Can they continue to produce it without finally becoming exhausted? Let the result of experiment decide this question.

It would be too tedious to describe here in detail all the experiments which I undertook with a view of answering in a decisive manner this important and disputed question. They may be found in my memoir On the Source of Heat excited by Friction. I have had it printed in the Philosophical Transactions for the year 1798; still these experiments bear too close a relation to my later researches on heat for me to omit attempting at least to give the reader a clear idea of the experiments and of their results.

The apparatus which I used in these investigations is too complicated to be represented in this place; still it will not be difficult for the reader, with the help of the accompanying figure (see Plate V.), to form a conception of the principal experiments and their results.

Let A be the vertical section of a brass rod which is an inch in diameter and is fastened in an upright position on a stout block, B; it is provided at its upper end with a massive hemisphere of the same metal, three and a half inches in diameter. C is a similar rod, likewise

vertical, to the lower end of which is fastened a similar hemisphere. Both hemispheres must fit each other in such a way that both the rods stand in a perfectly straight vertical line.

D is the vertical section of a globular metallic vessel twelve inches in diameter, which is provided with a cylindicral neck three inches long and three and three-quarter inches in diameter. The rod A goes through a hole in the bottom of the vessel, is soldered into the vessel, and serves as a support to keep it in its proper position.

The centre of the ball, made up of the two hemispheres which lie the one upon the other, is in the centre of the globular vessel, so that, if the vessel is filled with water, the water covers the ball as well as a part of each of the brass rods.

If now the hemispheres be pressed strongly together, and at the same time the rod C be turned, by some means or other, about its axis, a very considerable quantity of heat is generated by means of the friction which takes place between the flat surfaces of the two hemispheres.

The quantity of the heat excited in this manner is exactly proportional to the force with which the two surfaces are pressed together, and to the rapidity of the friction. When this force was equal to the pressure of ten thousand pounds, and when the rod was turned with such rapidity about its axis that it revolved thirty-two times a minute, the quantity of heat generated by the continual rubbing of the two surfaces together was extraordinarily great. It was equal to the quantity given off by the flame of nine wax-candles of moderate size all burning together.

The quantity of heat generated in this manner during a given time is manifestly the same, whether the globular vessel D is filled with water, and the surfaces of the two hemispheres rub on each other in this liquid, or whether there is no water in the vessel, and the apparatus by which the friction is produced is simply surrounded by air.

The source of the heat which is generated by this apparatus is inexhaustible. As long as the rod C is turned about its axis, so long will heat be produced by the apparatus, and always to the same amount.

If the globe-shaped vessel D is filled with water, this water becomes hotter and hotter, and finally begins to boil. I have myself in this way boiled a considerable quantity of water.

If this experiment is performed in winter when the temperature of the air is but little above the freezing-point, and if the vessel D is filled with a mixture of water and pounded ice, the quantity of heat caused

in a given time by the rubbing together of the two surfaces can be expressed very exactly by the amount of ice melted by this heat.

Since the apparatus affords heat continuously, and always to the same amount, we can melt in this way as much ice as we please.

But whence comes this heat? This is the contested point, to determine which was the real aim of the experiment.

It is certain that it comes neither from the decomposition of the water nor from the decomposition of the air. Various experiments on this point, which I have described at length in my memoir in the Philosophical Transactions, are more than sufficient to establish this fact beyond doubt.

Just as little does it come from a change in the capacity for heat brought about by friction in the metal of which the hemispheres are composed. This is shown, first, by the continuance and uniformity of the production of the heat; and, secondly, by an experiment bearing directly on this point, by which I am convinced that not the slightest change had taken place in the capacity of the metal for heat.

Just as little does it come from the rods which are attached to the hemispheres, for these rods were always warm, the hemispheres communicating heat to them.

Much less could this heat come from the air or the water immediately surrounding the hemispheres, for the apparatus communicated heat to both these fluids without cessation.

Whence, then, came this heat? and what is heat actually?

I must confess that it has always been impossible for me to explain the results of such experiments except by taking refuge in the very old doctrine which rests on the supposition that heat is nothing but a vibratory motion taking place among the particles of bodies.

A bell, on being struck, immediately gives forth a sound, and the oscillations of the air produced by these vibrations forthwith cause a quivering motion in those bodies with which they come in contact. On the other hand, a sponge filled with water cannot give off its moisture to the bodies in its vicinity for any length of time without itself losing moisture.

A very illustrious philosopher, for whom I have always entertained the greatest respect, and whom, moreover, I have the good fortune to count among my most intimate friends, M. Bertholet, has, in his admirable *Essai de Statique Chimique,* attempted to explain the results of this investigation, and to reconcile them with that theory of heat which is founded up the hypothesis of caloric.

If a man as learned, as honest, as worthy, and as renowned as is M. Bertholet, spares no pains in opposing the errors of a natural philosopher or chemist, one cannot and dare not keep silence unless he wishes to acknowledge himself vanquished. If, however, one can produce proofs—a fortunate thing for all those who find themselves driven to similar self-vindication—that the objections of M. Bertholet have no foundation, he has done very much towards establishing beyond doubt the opinions and facts in question.

I will now endeavor to answer the objections which M. Bertholet has offered to my explanation of the above-mentioned experiments; and, that the reader may be in a position to give to these objections their just value, I will insert them here in the writer's own words.

"Count Rumford has made a curious experiment with regard to the heat which may be excited by friction. He causes a blunt borer to revolve very rapidly (this borer revolved about its axis only thirty-two times a minute) in a brass cylinder weighing thirteen pounds, English weight (the cylinder weighed one hundred and thirteen pounds and somewhat more), and says that he observed that this borer in the course of two (one and a half) hours, and under a pressure equal to 100 cwt., reduced to powder 4145 grains (8½ ounces Troy) of brass, and that an amount of heat was generated during this operation sufficient to bring to boil 26.38 pounds of water, previously cooled to the freezing-point. He asserts that he did not discover the slightest difference between the specific heat of the metallic dust and that of the brass which had not experienced the friction. Hence he supposes that the heat was excited by the pressure alone, and was not at all due to caloric, as is the opinion of most chemists.

"I will for the present satisfy myself with simply inquiring whether it necessarily follows from this experiment that we must renounce entirely the received theory of caloric, according to which it is regarded as a substance which enters into combination with bodies, or whether this result cannot be explained in a satisfactory manner by applying to the case in question those laws of nature in accordance with which the operations of heat are manifested under other conditions.

"If the evolution of heat be regarded as a consequence of the decrease of volume caused by the pressure, then not only the metallic powder, but also all the rest of the brass cylinder must have contributed, though not in an equal manner, to this evolution, by the powerful expansive effort of that portion which experienced the greatest pressure, and consequently acquired the greatest temperature, without being able to assume the dimensions proper to this same temperature on account of the less heated and less expanded parts; consequently there must have arisen, necessarily, a certain condensation of the metal in respect of its natural dimensions, which condensation gradually decreased from the point where the pressure was greatest to the surface. We may suppose that this operation took place in a similar manner in all parts of the cylinder.

"As a consequence of this decrease of volume, an amount of caloric was given out equal to that which would have caused a similar increase of volume, on the supposition, that is, that the specific heat of the metal does not change through this range of the scale of the thermometer, and that the expansions are equal; and this, considering the range of temperatures and the consequent expansions, is probably not far from the truth. The entire amount of heat disengaged would have raised the cylinder to about 180° of Reaumur's scale; and if the expansion of brass by heat is equal to that of iron, which has been found to be 1-75000 for each degree of the thermometer, the 180 degrees would have caused an expansion of 18-7500 in each direction, and the decrease of volume must have brought about the same degree of heat if we suppose that the pressure stood in equal relation to this expansion.

"Now there is a change, and sometimes a very considerable one, wrought in the specific gravity of a metal, by percussion, by the action of a fly-wheel, or by the compression of a wire-drawing machine. It appears, for example, that the specific gravity of platina and of iron, on being forged, is thus increased by a twentieth part.

"Hence it appears that the experiment of Count Rumford is far from explaining satisfactorily a property which is well known, and called in question by no one.

"It is easy, it is true, to arrange side by side in an imposing manner the phenomena of heat; if, however, you were to say to one who has little or no knowledge of chemical speculations, 'Count Rumford's cylinder has, in the course of two hours, by means of a violent friction, afforded all the heat required to dissolve in water, without changing its temperature, 15 kilogrammes of ice, or as much as 2 hectogrammes (6½ ounces) of oxygen would require [*sic*] in its combination with phosphorus,' I do not know at which of these phenomena he would be most astonished.

"The slight changes which can take place in the amount of combined caloric have so inconsiderable an influence on the capacity for work of the caloric within the narrow limits of the thermometric scale, that it cannot be computed. Moreover, we have not, as yet, adequate data for determining the nature of the changes in this respect which take place in a solid body in consequence of the particular condition of condensation into which it has been brought by means of a certain mechanical force, and by degrees of heat differing greatly from each other.

"Besides, Rumford, in the experiment to determine the specific heat of the filings of bell-metal thus obtained, heated them to the temperature of boiling water. But this extremely elastic metal would very naturally as soon as left to itself, and especially during the operation just mentioned, resume that state of expansion and that capacity for heat which is proper to it at a given temperature, so that the effect of the pressure to which it has been subjected partly disappears again, just as a piece of metal which has been hammered resumes its natural properties on being annealed."

In reply to these remarks, I will call to mind what follows.

1st. The discovery which I made, that no considerable change had taken place in the specific heat of the metallic dust produced by the fric-

tion, led me in no way to the supposition that the heat excited in the experiment could not come from the caloric set free. I only found that the source of this heat was inexhaustible. To explain this phenomenon, which has never yet been explained, is the point now in question, and I do not see how it can be explained except by giving up altogether the hypothesis adopted in regard to caloric.

2d. If we actually suppose (and it is far from having been proved) that the simple pressing together of a metal is sufficient to expel the caloric contained in it; still the explanation of such a natural phenomenon would be advanced little or none; for since the action of the force which causes the pressure is continuous, the condensation of the metal brought about by this force would in a short time reach its maximum; and if really in this operation ever so much caloric had been disengaged from the metal, still it would very soon disperse. The rubbing surfaces, on the contrary, continue to give forth heat, and that always to the same amount.

3d. In regard to the objection made to the experiment which was undertaken with a view of determining whether a change had taken place in the capacity of the metallic dust for heat, this can very readily be answered, and in such a way that nothing, it seems to me, can be said against it. If the temperature of boiling water were really sufficient to give to these small, forcibly condensed particles of metal the quantity of heat necessary to bring them back to their original condition as far as their capacity for heat is concerned, then, as the water by which the apparatus was surrounded finally began to boil, they must, without doubt, have taken the necessary amount of heat from this water. If, now, these particles of metal received finally from the water the caloric which in the beginning they imparted to it, the question arises, whence came the caloric which served to heat, not only the water, but also the metal and the objects immediately surrounding it?

I am far from desiring to deceive anyone by an imposing arrangement of facts; but the facts in my experiments were so very striking that it was altogether impossible for me to help instituting comparisons and making calculations with regard to them which would make them clear, especially to those not yet sufficiently acquainted with such investigations.

I will now close my remarks with an entirely new computation. I will show whether it is probable that the metal could supply all the heat which was produced by friction in the experiment in question. If we

are to make this supposition, we must, in the first place, allow that all the heat came directly from the particles of metal which were separated from the solid mass of metal by the friction; for, since the mass remained in the same condition throughout the entire experiment, it is evident that it could contribute in no measure to the effect produced.

We will now inquire how much heat would have been developed if the experiment had been carried on without cessation, until the whole mass of metal had been reduced to powder by the friction.

After the experiment had lasted an hour and a half, there were 4145 grains (Troy) of the metallic dust, and during that time an amount of heat was produced by the friction sufficient to raise 26.58 pounds of ice-cold water to the boiling-point.

Since the mass of metal weighed 113.13 pounds, or 791,910 grains, all this metal would have been reduced to powder if the experiment had lasted uninterruptedly, day and night, for 477½ hours, or for 19 days 21½ hours, and during this time an amount of heat would have been produced sufficient to have raised 5078 pounds of water to the boiling-point.

Since the metal used in this experiment showed a capacity for heat which was to that of water as 0.11 to 1, it is evident that this amount of heat would have been sufficient to raise a mass of the same metal 46,165 pounds in weight through 180 degrees of Fahrenheit's scale, or from the temperature of melting ice to that of boiling water.

This amount of heat would be sufficient to melt a mass of metal sixteen times heavier than that which I used in the experiment.

Is it at all conceivable that such an enormous quantity of caloric could really be present in this body? But even this supposition would be by no means sufficient for the explanation of the fact in question, as I have shown by a decisive experiment that the capacity of the metal for heat has not sensibly altered.

Whence, then, came the caloric which the apparatus furnished in such abundance?

I leave this question to be answered by those persons who believe in the actual existence of caloric.

In my opinion, I have made it sufficiently evident that it was impossible for it to come from the metallic bodies which were rubbed together, and I am absolutely unable to imagine how it can have come from any other object in the neighbourhood of the apparatus, for all these objects received their heat constantly from the apparatus itself.

THOMAS YOUNG

THOMAS YOUNG was born in Somerset, England, in 1773, the youngest of ten children. He was very precocious and learned mathematics, the languages, natural science and philosophy all at an early age. He took his doctor's degree at Cambridge. In 1801 he became professor of natural philosophy at the Royal Institution, and in 1802 secretary of the Royal Society.

His discovery of the interference of light and explanation of it by the wave theory was in 1801. This did much toward establishing the wave theory first advanced by Huyghens in 1690.

At the time of his death in 1829 he was much interested and had made substantial progress in interpreting the Egyptian hieroglyphics.

AN ACCOUNT OF SOME CASES OF THE PRODUCTION OF COLORS NOT HITHERTO DESCRIBED

READ JULY 1, 1802

Whatever opinion may be entertained of the theory of light and colors which I have lately had the honor of submitting to the Royal Society, it must at any rate be allowed that it has given birth to the discovery of a simple and general law capable of explaining a number of the phenomena of colored light, which, without this law, would remain insulated and unintelligible. The law is, that "wherever two portions of the same light arrive at the eye by different routes, either exactly or very nearly in the same direction, the light becomes most intense when the difference of the routes is any multiple of a certain length, and least intense in the intermediate state of the interfering portions; and this length is different for light of different colors."

I have already shown in detail the sufficiency of this law for explaining all the phenomena described in the second and third books of Newton's *Optics,* as well as some others not mentioned by Newton. But it is still more satisfactory to observe its conformity to other facts, which

constitute new and distinct classes of phenomena, and which could scarcely have agreed so well with any anterior law, if that law had been erroneous or imaginary: these are the colors of fibres and the colors of mixed plates.

As I was observing the appearance of the fine parallel lines of light which are seen upon the margin of an object held near the eye, so as to intercept the greater part of the light of a distant luminous object, and which are produced by the fringes caused by the inflection of light already known, I observed that they were sometimes accompanied by colored fringes, much broader and more distinct; and I soon found that these broader fringes were occasioned by the accidental interposition of a hair. In order to make them more distinct, I employed a horse-hair, but they were then no longer visible. With a fibre of wool, on the contrary, they became very large and conspicuous; and, with a single silk-worm's thread, their magnitude was so much increased that two or three of them seemed to occupy the whole field of view. They appeared to extend on each side of the candle, in the same order as the colors of thin plates seen by transmitted light. It occurred to me that their cause must be sought in the interference of two portions of light, one reflected from the fibre, the other bending round its opposite side, and at last coinciding nearly in direction with the former portion; that, accordingly, as both portions deviated more from a rectilinear direction, the difference of the length of their paths would become gradually greater and greater, and would consequently produce the appearances of color usual in such cases; that supposing them to be inflected at right angles, the difference would amount nearly to the diameter of the fibre, and that this difference must consequently be smaller as the fibre became smaller; and, the number of fringes in a right angle becoming smaller, that their angular distances would consequently become greater, and the whole appearance would be dilated. It was easy to calculate that for the light least inflected the difference of the paths would be to the diameter of the fibre very nearly as the deviation of the ray at any point from the rectilinear direction to its distance from the fibre.

I therefore made a rectangular hole in a card, and bent its ends so as to support a hair parallel to the sides of the hole; then, upon applying the eye near the hole, the hair, of course, appeared dilated by indistinct vision into a surface, of which the breadth was determined by the distance of the hair and the magnitude of the hole, independently of the temporary aperture of the pupil. When the hair approached so near to

the direction of the margin of a candle that the inflected light was sufficiently copious to produce a sensible effect, the fringes began to appear; and it was easy to estimate the proportion of their breadth to the apparent breadth of the hair across the image of which they extended. I found that six of the brightest red fringes, nearly at equal distances, occupied the whole of that image. The breadth of the aperture was 66-1000, and its distance from the hair 8-10 of an inch; the diameter of the hair was less than 1-500 of an inch; as nearly as I could ascertain, it was 1-600. Hence, we have 11-1000 for the deviation of the first red fringe at the distance of 8-10; and as 8-10 : 11-1000 : : 1-600 : 11-480000, or 1-43636 for the difference of the routes of the red light where it was most intense. The measure deduced from Newton's experiments is 1-39200. I thought this coincidence, with only an error of one-ninth of so minute a quantity, sufficiently perfect to warrant completely the explanation of the phenomenon, and even to render a repetition of the experiment unnecessary; for there are several circumstances which make it difficult to calculate much more precisely what ought to be the result of the measurement.

When a number of fibres of the same kind—for instance, a uniform lock of wool—are held near to the eye, we see an appearance of halos surrounding a distant candle; but their brilliancy, and even their existence, depends on the uniformity of the dimensions of the fibres; and they are larger as the fibres are smaller. It is obvious that they are the immediate consequences of the coincidence of a number of fringes of the same size, which, as the fibres are arranged in all imaginable directions, must necessarily surround the luminous object at equal distances on all sides, and constitute circular fringes.

There can be little doubt that the colored atmospherical halos are of the same kind; their appearance must depend on the existence of a number of particles of water of equal dimensions, and in a proper position with respect to the luminary and to the eye. As there is no natural limit to the magnitude of the spherules of water, we may expect these halos to vary without limit in their diameters, and accordingly Mr. Jordan has observed that their dimensions are exceedingly various, and has remarked that they frequently change during the time of observation.

I first noticed the colors of mixed plates in looking at a candle through two pieces of plate-glass with a little moisture between them. I observed an appearance of fringes resembling the common colors of thin plates; and, upon looking for the fringes by reflection, I found that

these new fringes were always in the same direction as the other fringes, but many times larger. By examining the glasses with a magnifier, I perceived that wherever these fringes were visible the moisture was intermixed with portions of air, producing an appearance similar to dew. I then supposed that the origin of the colors was the same as that of the colors of halos; but, on a more minute examination, I found that the magnitude of the portions of air and water was by no means uniform, and that the explanation was, therefore, inadmissible. It was, however, easy to find two portions of light sufficient for the production of these fringes; for the light transmitted through the water, moving in it with a velocity different from that of the light passing through the interstices filled only with air, the two portions would interfere with each other and produce effects of color according to the general law. The ratio of the velocities in water and in air is that of 3 to 4; the fringes ought, therefore, to appear where the thickness is six times as great as that which corresponds to the same color in the common case of thin plates; and, upon making the experiment with a plane glass and a lens slightly convex, I found the sixth dark circle actually of the same diameter as the first in the new fringes. The colors are also very easily produced when butter or tallow is substituted for water; and the rings then become smaller, on account of the greater refractive density of the oils; but when water is added, so as to fill up the interstices of the oil, the rings are very much enlarged; for here the difference only of the velocities in water and in oil is to be considered, and this is much smaller than the difference between air and water. All these circumstances are sufficient to satisfy us with respect to the truth of the explanation; and it is still more confirmed by the effect of inclining the plates to the direction of the light; for then, instead of dilating, like the colors of thin plates, these rings contract: and this is the obvious consequence of an increase of the length of the paths of light, which now traverse both mediums obliquely; and the effect is everywhere the same as that of a thicker plate.

It must, however, be observed that the colors are not produced in the whole light that is transmitted through the mediums: a small portion only of each pencil, passing through the water contiguous to the edges of the particle, is sufficiently coincident with the light transmitted by the neighboring portions of air to produce the necessary interference; and it is easy to show that, on account of the natural concavity of the surface of each portion of the fluid adhering to the two pieces of glass,

a considerable portion of the light which is beginning to pass through the water will be dissipated laterally by reflection at its entrance, and that much of the light passing through the air will be scattered by refraction at the second surface. For these reasons the fringes are seen when the plates are not directly interposed between the eye and the luminous object; and on account of the absence of foreign light, even more distinctly than when they are in the same right line with that object. And if we remove the plates to a considerable distance out of this line, the rings are still visible and become larger than before; for here the actual route of the light passing through the air is longer than that of the light passing more obliquely through the water, and the difference in the times of passage is lessened. It is, however, impossible to be quite confident with respect to the causes of these minute variations, without some means of ascertaining accurately the forms of the dissipating surfaces.

In applying the general law of interference to these colors, as well as to those of thin plates already known, I must confess that it is impossible to avoid another supposition, which is a part of the undulatory theory—that is, that the velocity of light is the greater the rarer the medium; and that there is also a condition annexed to the explanation of the colors of thin plates which involves another part of the same theory—that is, that where one of the portions of light has been reflected at the surface of a rarer medium, it must be supposed to be retarded one-half of the appropriate interval—for instance, in the central black spot of a soap-bubble, where the actual lengths of the paths very nearly coincide, but the effect is the same as if one of the portions had been so retarded as to destroy the other. From considering the nature of this circumstance, I ventured to predict that if the two reflections were of the same kind, made at the surfaces of a thin plate of a density intermediate between the densities of the mediums containing it, the effect would be reversed, and the central spot, instead of black, would become white; and I have now the pleasure of stating that I have fully verified this prediction by interposing a drop of oil of sassafras between a prism of flint-glass and a lens of crown-glass; the central spot seen by reflected light was white and surrounded by a dark ring. It was, however, necessary to use some force in order to produce a contact sufficiently intimate; and the white spot differed, even at last, in the same degree from perfect whiteness as the black spot usually does from perfect blackness.

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